DOCUMENT RESUME

ED 168 934 SO 011 592

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TITLE The American High School. Its Social System and Effects. Youth in Transition Working Paper 9.
INSTITUTION Michigan Univ., Ann Arbor. Inst. for Social Research.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE 73
CONTRACT OEC-5-85-054
NOTE 331p.; Appendix A may not reproduce clearly due to light and broken print type of original document

EDRS PRICE MF01/PC14 Plus Postage.
DESCRIPTORS Academic Achievement; Academic Aptitude; Adolescents; Environmental Influences; *Evaluation; Evaluation Criteria; Evaluation Methods; *High Schools; High School Students; High School Supervisors; Males; National Surveys; Secondary Education; Secondary School Teachers; Social Influences; *Student Attitudes; Student Characteristics; *Student Opinion; *Student School Relationship; *Success Factors; Tables (Data); Values

ABSTRACT

This document, the result of the Youth in Transition longitudinal study, describes procedures, rationale, and major results of an evaluation of American high schools. The purpose of the study was to examine factors that make some schools superior to others. A "good" school is defined as one which has a greater than average desirable impact on its students and a lower than average undesirable one. Over 1300 young men from 87 high schools provided data for the study by answering questionnaires. The approach was to consider all school characteristics that might make a difference for students. The data, consolidated and reduced from some 1600 to 32 variables, were categorized under headings of knowledge and achievement, behaviors, plans, attitudes and values, affective states, motives, aptitudes, abilities, and school reputation. Separate chapters of this document describe the present state of knowledge in the field, the research design, concept and instrument development, major data collections, and descriptive information on American high schools. Findings indicate that high schools have virtually no differential impact on student development. The author suggests a major social experiment in which diverse forms of education are created. Suggestions to change the organizational structures of formalized schooling are also presented. Appendices include ten questionnaires and student interviews. (KC)

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Youth in Transition Working Paper 9

THE AMERICAN HIGH SCHOOL

Its Social System and Effects

Lloyd Johnston

SO 011 592

Institute for Social Research
The University of Michigan
Ann Arbor, Michigan
1973

PREFACE

The research reported in this volume is an integral part of a nationwide longitudinal study of adolescent boys entitled Youth in Transition. Since its inception in 1965, the Youth in Transition study has been under the primary sponsorship of the U.S. Office of Education, with supplementary support having been provided by the Department of Defense, the Department of Labor, and the W.T. Grant Foundation.*

Publications and Future Plans

The results of this study have been presented in several different publication formats, including a working paper series and monograph series. As has been the case with several of the previous working papers, the content of this one will be revised, expanded considerably, and then published in monograph form.

Since the Youth in Transition study is an ongoing project, there will be more publications and data collections in the future. By the Spring of 1974, most of our respondents will have been out of high school about five years. At that point we will add a fifth data collection to assess the experiences of our panel in major post-high school environments (college, work and military service) and to compare the impacts of those environments to the impact of the high schools.

Acknowledgements

A research undertaking of the magnitude of the one described here could not have taken place without the cooperation and contributions of many people. I am particularly indebted to the principal investigators of the Youth in Transition project, Jerald Bachman and Robert Kahn, not only for their support and inspiration, but for their substantial contributions to the content and methodology of the work presented in this volume, as well. Robert Kahn introduced me to a new way of thinking about organizations some eight years ago, and the conceptual approach used in this volume to describe the high school as a dynamic social system reflects his influence to a great degree. Jerald Bachman, who has become a close friend and colleague over the life of this study, has contributed, among other things, his keen insights into the analysis of complex data. As principal investigator in the study he also has provided a great deal of autonomy and responsibility, for which I am most appreciative.

---

* Most of the work for this volume was completed under Contract No. OE-5-85-054, Project No. 5-0196 of the U.S. Office of Education, Department of Health, Education, and Welfare.

I would also like to extend my appreciation to the other two colleagues at Michigan, Stanley Seashore and Frank Womer, for the suggestions and perspective each has brought to bear on this work -- Stan Seashore from the tradition of organizational theory and Frank Womer from the tradition of educational research and assessment. This study has provided an opportunity to meld those two traditions, and having such knowledgeable representatives of each has been of great assistance.

In addition, I would like to acknowledge the help of a number of my colleagues on the project staff. During the instrument development and analysis phases, Willard Rodgers was an active and valued collaborator. His contributions were diverse, but are particularly reflected in the counseling instruments. Other contributors to this phase included Terrence Davidson and Jerome Johnston. During the early stages of literature review, instrument development, and data collection, Sally Iman provided a great deal of able assistance.

Because of the complexity of the data sources in this study and the large number of cases and variables involved, our computing problems were enough to try a patient man. Terrence Davidson, who was responsible for the major file management and software development efforts during most of the life of the project, made a particularly able contribution in this area. Patrick O'Malley, Barbara Thomas and Janice Plotkin have subsequently all given generously of their time and knowledge of data processing. O'Malley and Davidson have also provided valuable collaboration in the development of the analysis methodology presented in this volume.

The tables and text of this manuscript were ably prepared by Gayle Ackley; while Susan Shapiro undertook the arduous task of typing appendix A.

Once cannot do justice to all individuals nor enumerate all of their contributions, but I would like to acknowledge in a general way the assistance of the members of the Survey Research Center's Sampling, Field, Coding, and Computer Service sections; and to thank the many past and present members of the Youth in Transition staff, who are listed below:

Gayle Ackley
Donna Ando
Allison Arscott
Jerald Bachman
Joy Bingham
Lynn Bozoki
Janet Bumpass
Robert Cope
Diane Davidson
Terrence Davidson
John French, Jr.
Regina Gerstman
Swayzer Green
Penni Holt
Sally Iman
Mary Jacobs
Jerome Johnston
Joseph Johnston, Jr.

Robert Kahn
Rita Lamendella
Judith Long
Martha Mednick
Haydee Navarro
Roberta Niaki
Guttorm Norstebo
Patrick O'Malley
Karen Paige
Janice Plotkin
Philip Rappaport
Joel Raynor
Willard Rodgers
Susan Shapiro
Claire Taylor
Barbara Thomas
Elizabeth van Duinen
Patricia Veerkamp
Ilona Wirtanen

My long association with these many individuals has been both gratifying and stimulating, and I thank them all for their direct and indirect contributions to this work.

Finally, the cooperation of our nearly five thousand respondents -- students, teachers, counselors, and principals -- must be acknowledged. All of them were asked for a considerable amount of time by normal survey research standards; our plea being that the research was important enough to justify such an investment on their part. We continue to believe that it is, and hope that through this publication and the many others from the study, we come to vindicate their exceptional level of cooperation.

L. J.

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INTRODUCTION

We are all experts in education, for we have all been there once ourselves and seen first-hand just what school is all about. We know the things it did for us, we know the things it did not do, and we think we know the reasons why. Many of us also have school-age children and have heard from them what the experience is like today; and probably almost all of us feel that to some degree we can deduce from the way young people act these days what is right and what is wrong about what the schools are doing. How often have you heard such statements as "they're just not getting enough discipline these days," or "most schools are stultifying, rigid places that fail to excite young people," or "the three R's have gotten lost in the shuffle; whatever happened to the basics?" Prescriptions abound, proscriptions as well, from all of the self-appointed experts -- and that means just about all of us.

But do we really know what the ingredients for a good education or a good school are? Perhaps the fact that we are all experts has left us too complacent about the veritable chasms in our knowledge and, worse yet, about our pressing need to bridge them. After all, most will acknowledge that the educational function is a centrally important one in any society, and consistent with that belief we spend tens of billions of dollars in the United States every year on our educational institutions. But upon closer examination we find that an incredibly small proportion of those expenditures are devoted to finding out how the schools are working and how they might be improved -- research and development activities. In other sectors -- most notably business and the military -- research and development have long been acknowledged as critical to the vitality and success of the participating institutions. In the business sector, for example, investment advisors nearly always look at corporate R and D figures when trying to identify those companies with the most promising futures.

Perhaps because there is relatively little competition within the educational sector, there has been less motivation for the schooling systems themselves to launch evaluation and improvement efforts on a comparable scale. The inputs of students and basic financial support have been almost guaranteed regardless of performance. But it must also be acknowledged that the task is an easier one in most other sectors: the products are more clearly definable, and thus the criteria of success. In education the products consist largely of such amorphous things as changes in students' knowledge, abilities, attitudes, and so on. There is also considerable disagreement about which of these various products should receive the highest priorities (see Johnston, 1970, and Johnston and Bachman, 1973) and there is no market system to answer the question.

We hasten to add, however, that while such differences may help to explain why research and development in education have lagged behind levels in other areas, they do not constitute a justification for it. The education and socialization of new generations are simply too centrally important to the society -- particularly a society undergoing accelerating rates of social and technological changes -- to allow them to become obsolete (or remain primitive, depending on your point of view).

Purposes of the Present Study

The present study had as one of its major purposes an evaluation of the functioning of American high schools with the intent of suggesting how they might be improved in the longer run. Presented here are the results of our efforts to do just that, and an exploration of the implications our results may have for the development of education in the future. In the Youth in Transition study -- one of the relatively few studies of education done on a scale even roughly proportionate to the size and importance of the task -- we were fortunate enough to have a nationally representative sample of male high school students from whom we could gather longitudinal data over the three years of high school, from the beginning of tenth grade to the end of twelfth.

Our purpose, basically, was to determine what it is that makes some schools superior to others. Is it having high student achievement, well-paid teachers, a strong principal, or a high level of innovation?

To answer such questions first required us to define what we meant by a "good school." The definition we found most intuitively satisfying -- albeit not terribly original -- was that a good school is one which has a greater than average impact on its students in desirable directions and a lower than average impact in undesirable ones. Whether these impacts are intentional or unintentional on the part of school staffs seems irrelevant. The student with enhanced self-esteem is no better off if that outcome was intended by school personnel than if it was a chance by-product of other efforts. This is, of course, a much broader definition than has been used traditionally in studies of schools and their effects.

Given this definition, it is an empirical question whether high teacher pay or a great deal of innovation are characteristics of good schools. To answer it we had to specify student outcomes of relevance, specify methods for measuring school impact on them, and then test for evidence of beneficial effects resulting from such school characteristics, as well as many others. This is what we did, and this volume describes the procedures we followed, our rationale for them, and the major results to emerge.

The process of testing school effects took place at two levels -- first at the level of average school effects on the student body and later at the level of specific effects on individual students. The results of the former tests are presented here in detail, with considerable emphasis being given to the important processes of conceptualization, instrument development, and data reduction. The results of the individual level analyses are also summarized here, but will be elaborated in greater detail in an expanded version of this volume to be published at a later date.

Before delving into the specifics of this study, however, it is worth considering the institutional history of the modern American high school, on which we focus here, and also the state of the existing knowledge in the field. Taking these earlier paths will allow us to place both the study and the institution being studied into a broader historical perspective.

The History of American Secondary Education

A number of authors have recorded the emergence of secondary education in America, among them Butts and Cremin (1953), Meyer (1957), Flanagan et al. (1962), Sizer (1964), and Austin (1969). The story which unfolds is a dramatic illustration of rapid social and structural change, both in terms of the number and purposes of such institutions.

Early Precursors. In its first incarnation, American secondary education existed in the form of the Latin grammar school -- a private institution which existed primarily to prepare the children of the elite for college. The first such school was established in 1635, the Boston Latin Grammar School, and elite schools of its type spread quickly throughout the colonies. The lower classes had to make do with elementary school education and apprenticeships.

A new type of institution, the academy, came into being in the latter half of the eighteenth century as a larger merchant and trading class emerged and presented the need for a more practical, terminal education. In 1752, Benjamin Franklin established the first such academy, which had as its primary purposes vocational training and training in the practical arts, though courses such as mathematics, foreign languages, history, and philosophy were also offered. It is estimated that more than 6000 academies had come into existence by 1850 with a total enrollment of more than a quarter of a million students -- girls as well as boys. (Butts and Cremin, 1953)

The Emergence of the Public High School. The academies served a broader sector of the population than the Latin grammar schools, but still were private and therefore primarily accessible to the upper and middle classes. The high school, with its emphasis on free, universal education, was thus brought into being, and it eventually emerged as the dominant form of institution providing secondary education. Again, the form originated in Boston. In 1821 a special committee which had been created to study the educational needs of the times concluded that grammar schools had not adequately met those needs. First, a high school for boys was established as a result of the committee's report; then a little later, one for girls. They did not spread widely for some fifty years, largely because the idea of public financing of secondary education remained unpopular with many segments of the population, particularly farmers, who felt that their children should be released from schooling at an early age to allow their apprenticeships to begin. Therefore, they objected to being taxed for the support of secondary schools which they viewed as being of no value to them.

Movement Toward Universal Secondary Education. The change in the occupational structure of the population during the Industrial Revolution undoubtedly had the effect of reducing such public opposition. However, the precipitating event which led to the rapid proliferation of high schools in the country was an 1874 Michigan Supreme Court decision, known as the Kalamazoo case, in which it was ruled that local school districts had the right to levy taxes in support of higher levels of education. This was an extension of their right to use public funds to provide common schools at the primary levels.

From 1870 to 1890 there was a five-fold increase in the number of high schools in the country, the number going from 500 to 2500, though even by 1890 less than 4% of the age group from fourteen to seventeen years old was estimated to be enrolled (Flanagan, et al., 1962). That proportion doubled to 8% by the turn of the century, and in the first seven decades of the twentieth century, rose to better than 80% (Bachman, et al., 1971). Thus, by 1970 approximately 10 million young people in that age range were attending high schools, reflecting an incredible growth in the size and importance of the institution in the span of one lifetime.

The Evolution of Purposes and Programs. During that same time span certain other important events colored the nature of the emerging institution. In 1891 the Committee of Ten, a committee of leading scholars of the day established by the National Education Association, concluded that preparation for college should be the primary purpose of high schools. They also concluded, Sizer (1964) reports, that "life and college were both best prepared for by a mental discipline developed through a study of the academic subjects." They suggested four basic courses of academic study: classical, Latin-scientific, modern languages, and English. That committee and others to follow, had considerable influence on the emphasis and curriculum of American high schools for decades to come.*

Several subsequent events, however, had the effect of counterbalancing to some degree the exclusive emphasis on college preparation which the Committee of Ten had urged. In 1917 the Smith-Hughes Bill was passed giving financial aid to the states to develop programs of vocational education. (A Presidential Commission four years earlier had urged that a national system of vocational and agricultural schools be developed through federal support). But a system of separate vocational schools did not emerge to the extent expected, either as a result of the Smith-Hughes Bill or as a result of subsequent legislation extending its scope. Instead much of the federal money was spent by the states on their high schools to expand their curricula to include various types of vocational and practical training. (Flanagan, et al., 1962; Austin, 1969) Thus emerged the so-called "comprehensive" high school.

Flanagan and others (1962) gave the following summary of the recommendation of three important commissions convened between 1910 and 1930, all of which urged reforms in the direction of expanded purposes and more flexible curricula in high schools:

> The Committee of Nine on Articulation of High School and College was established by the NEA in 1910. In its report, which was made in 1911, it was recommended that the high school maintain a common core of studies consisting of eleven units. This would allow four units for special interests of the individual students. The NEA Commission on Reorganization of Secondary Education rejected college preparation as the sole or even primary objective of the high school. The thinking of the commission was that high schools should prepare a person in these seven areas: (1) health, (2) command of oral and written expression, arithmetic, and reading, (3) home membership, (4) vocation, (5) citizenship, (6) use of leisure, and (7) ethical character.
>
> The year 1930 brought the formation of the Commission on the Relation of School and College of the Progressive

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* Other NEA Committees convened around this time recommended that children spend fewer years in elementary school, with the result that the junior high school began to emerge as a separate institution around 1910 (Austin, 1969).

> Education Association. This Commission tried to free secondary schools from the strong influence of college entrance requirements, and the result of this was the eight-year study (1933 through 1941). Findings of this study indicated that in general the young people from 30 schools who had been exempted from the prescribed college program did as well in college as the students from the more traditional schools. The study also indicated that these students tended to show more drive, intellectual curiosity, aesthetic interests, and other desirable characteristics (pp. 1-4 to 1-5).

Since the 1940's an increasing number of study groups and commissions have investigated American schools and controversy over the schools has increased. Perhaps the most important recent current in the changing tides of emphasis, however, sprang from the unexpected launching of Sputnik by Russia in 1957. The people of America started worrying about the competitive standing of their educational system, and came to the conclusion that there should be an increased emphasis on rigor and greater attention paid to mathematics and the natural sciences.

In 1959 James Bryant Conant, who had just retired from the presidency of Harvard University, urged the consolidation of smaller high schools into larger ones which could afford to have a more complete academic curriculum, particularly in mathematics and the sciences. Conant's study was particularly influential, and in the years since we have seen a great deal of school and school system consolidation take place. In fact, our own data indicate that by the Fall of 1966, 50% of the tenth grade students were attending schools with enrollments of over 1200 students (See Appendix A).

Recent Developments. Since 1960 a number of important shifts have taken place in the schools. As a result of a landmark decision by the Supreme Court, de jure segregation of the races was rendered illegal, and the consolidation of systems which had been so separated thus began, particularly in the South.

Racial discontent in the middle and late 60's spilled over into the schools as did a growing militancy among the youth of the nation generally. Fights, disruptions, and student strikes were frequent, and legitimate authority generally was severely challenged during that period. Many school administrators found themselves unprepared and unequipped for dealing with such changes, and turnover in their ranks increased. To compound their troubles, teachers became more forceful and the strength and militancy of teacher unions began to grow.

It was during this rather dynamic period that the Youth in Transition study took place. We did not anticipate the turmoil of the period when the study was launched, for high schools had seemed relatively stable social systems for a number of years prior, and it is possible that the upheavals during that time set in motion some changes in the schools which were not captured in our study. But, we do not see evidence of sufficient change in the period which has elapsed since to suggest that the thrust of our major findings would be inapplicable now. Indeed, as educators (if not as researchers) we might wish that we had seen such a degree of change.

THE STATE OF KNOWLEDGE IN THE FIELD

There are at least two major literatures and related bodies of research which are of relevance to the undertaking reported here; the literature on educational institutions and the more general literature on all types of formal organizations. Since the contributions derived from the literature on formal organizations will be summarized in a following section, which deals with the sources of the concepts and instrumentation used in this study, the present section will deal exclusively with the literature on the impact of educational systems.

First, a method for classifying that vast literature into meaningful groupings is proposed. Then a systematic review of the portions deemed to be of greatest relevance to the present study is presented.

Classifying the Research Literature on Educational Effects *

There are multiple levels of social system in almost all American public schools: the student-teacher dyad; the small group of the classroom; the more elaborate collectivity of the curriculum grouping; the school, which is a complex organization; the school system, which is a system of complex organizations; and so on. Each of these social structures is an open system of some complexity, and each is a subsystem of the structures mentioned subsequent to it in the listing.

Educational research can and does focus on the explanation of outcomes at all of these levels (e.g.,on individual test scores, classroom averages, school averages, and so on). The explanatory variables in such studies are most often drawn from the same system level as the variables to be explained, but they can also be drawn from any of the other system levels. Thus, the individual student's achievement might be predicted not only from his unique relationship with his teacher, but also from the nature of the atmosphere in the classroom as a whole, the facilities that the entire school has available, the leadership style of the superintendent, etc. Therefore, the level of

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* Three broad classes of educational literature may be distinguished -- theoretical, research, and training. Only the literature on empirical research will be addressed in this volume, although the classificatory system proposed below may apply fairly well to the other two classes.

social system upon which the educational research focuses is a useful characteristic for differentiating a number of research traditions, since somewhat different types of variables and processes tend to be treated at the different levels.

Another important dimension upon which educational research can be classified is the level of institution in which the students are enrolled, e.g., primary, secondary, post-secondary, etc. This dimension not only separates research into different categories according to the ages of the students served, but also separates it into quite different classes of organizational complexity in the schools being studied. Primary schools, for example, are usually quite simple structures, with each teacher having a single class of students for the day, and all teachers reporting directly to the principal. Secondary schools, on the other hand, introduce several additional elements of complexity, including individualized course selection by the students, multiple-class teaching by the teachers, greater role differentiation for all staff, and additional levels of authority in the hierarchy. Since different levels of system (dyad, class, etc.) may be investigated at educational institutions of each type (primary, secondary, and so forth), it is possible to create a two-way classification of the research literature, which is illustrated in Table 0.

Past research efforts are by no means evenly distributed across all of the domains specified in Table 0. In fact, the great majority of the research falls within a few of the cells; and further, if one were to introduce a third logical dimension for categorizing the research -- namely the types of variables being examined -- an even greater concentration of existing research undoubtedly would emerge within the resulting three-dimensional space.

For instance, within the cell of organizational studies at the high school level, "tangible school resources" and "organizational processes" constitute two classes of variables for which educational impact could be assessed. Most of the actual research has been concentrated on variables of the former type.

In sum, several important dimensions have been suggested for distinguishing among the classes of theory and research on educational effects:

1. Level of schooling being examined
2. Types of outcome variables of interest
3. Social system level at which the outcome variables are defined
4. Types of explanatory variables of interest
5. Social system level at which the explanatory variables are defined.

TABLE 0

A SYSTEM FOR CLASSIFYING THE RESEARCH ON EDUCATIONAL EFFECTS

	Level of Social System			
Stage of Schooling	Dyad (e.g. student-teacher)	Group (e.g. classroom curriculum grp)	School	School System
Nursery				
Primary				
Jr. High				
High School			■	
College				
Graduate School				

Having specified the relevant dimensions for classifying the research on educational impact, it now becomes possible to categorize the major traditions and to judge their distance from the present study in this multidimensional space.

The Major Traditions

Herriott and Muse (1973) in an overview article on the educational research literature, state that three major traditions can be identified in the study of educational effects. (Note that it is possible to locate all of these in just a few of the cells in Table 0.) The longest-lived is the body of research on teacher effectiveness, derived primarily from educational psychology, which has been concentrated almost entirely in the elementary and secondary levels and which deals with dyadic or small group systems. Rosenshine reviewed this sub-literature in 1971 and more recent in-depth treatment may be found in Travers (1973). Since virtually all such research has focused on the dyad and group levels of social system, levels which are not addressed in the present study, that literature will not be examined further here.

The second major tradition identified was the study of college experiences and their impact on personality and later career. The independent variables in this case are at the school level, not the classroom or dyad level, which makes that tradition of more relevance to our present undertaking. Therefore, we will review the results of that area below, to determine what implications it may have for the study of high school effects.

Finally, the third and most recent of the traditions in the educational research literature has involved the study of the impact of school resources on student outcomes, usually standardized tests, and the interaction between those resources and the characteristics of the students served. These studies have focused primarily on the elementary and secondary levels and are clearly the most relevant to the present volume. Therefore, that literature will also be reviewed here with primary attention being given to the two landmark studies in the field to date, Project TALENT and the Coleman Report.

Studies of Organizational Impact at the College Level

Since there is a rather extensive research literature on the assessment of organizational impact at the college level, it may be helpful to look at the nature of the findings in that field in particular. However, before surveying some of the major findings from that literature, we should note that colleges differ from high schools in some very important ways other than the most obvious one, which is the age of the students served. These differentiating features do set limits on the generalizability to the high school level of findings based on colleges.

College vs. High School: Some Distinguishing Features. One of the most important features which distinguishes the modal college or university from the modal public high school is the strong element of self-selection by students at the college level. First, potential students get to decide whether to attend college at all, and second, those who do decide to continue their education have a considerable amount of individual discretion concerning which college to attend. These two types of self-selection surely result in greater congruence between student goals and institutional goals than exists at the high school level. Many of those who lack appropriate skills or who tend to be non-compliant select themselves out, and for those who do attend there is a greater chance to select institutions which they think are working toward goals they share.

As a result of this self-selection process, one would also expect to find less within-school variation at the college level and greater between-school variation on a number of important student dimensions, including academic motivation, personal interests and values, background, abilities and academic histories. (Feldman and Newcomb, 1969, present an excellent review of the considerable literature documenting such differences in their fifth chapter.) These differences are further accentuated by the fact that most colleges get to select from the pool of self-nominated applicants those which fit their specific criteria for admission.

By way of contrast, the assignment of students to high schools currently involves much less "matching." It would obviously be incorrect to suggest that high schools are assigned their students on anything like a random basis, for important elements of self-selection are to be found at that level, too. Existing housing patterns tend to segregate large portions of the population on the basis of socioeconomic class and race. To the extent school districts differ in the mix of such strata, there is an important element of self-selection in the matching of students to schools. Further, in at least some proportion of the individual decisions about housing locations, the families are specifically influenced by the perceived qualities of the schools. This results in an even greater element of selection than might be deduced from class and racial composition alone. Nevertheless, it seems clear that despite the degree of selective entry which is now taking place in the public schools, including the high schools, American colleges have an even greater element of self-selection in the process by which students are matched with those institutions.

In addition to the greater variation in the characteristics of the student bodies at the post-secondary level which results from differences in the matching procedure, there is also greater variation in the types of institutions which can be attended. In size, colleges and universities may range from a few hundred students to 40,000 or more -- a range perhaps eight times as large as the range of high school sizes. They also vary as to whether they are residential or commuting institutions; two-year, four-year, or even six or eight-year institutions; publicly or privately supported; sectarian or non-sectarian; colleges or complex universities; and so on.* Since colleges have a great deal more variation on such important dimensions, one would expect to find greater differential impacts among colleges than among high schools since there is a much greater diversity in what the experience consists of.

It should also be noted that the experience of going to college is a more "total" experience for most students than going to high school, since a greater fraction of the student's life is encompassed within the institutional setting. High school students spend more of their time at home than at school. Quite the opposite is true for college students, with the result that the institution can influence more of their experiences. At the same time and for the same reason -- namely, institutional living -- a greater segregation from other age groups exists for students in most colleges than exists for those in high schools, with the result that peer influences are likely to be even more important at the college level. (For a demonstration of this point in the area of drug use, see Johnston, 1973, pp. 195-198, 208-210.)

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* Feldman and Newcomb (1969), after reviewing the research which compares the "organizational climates" of the various basic types of institutions, concluded that there are some substantial differences among them. "Various indices of college environments suggest that the different types of colleges tend...to confront their students with different environments. For example, teacher colleges and state colleges are apt to be high in influences of a 'practical' nature, while in highly selective liberal arts colleges the emphasis is on scholarship, and sense of community is usually prominent in strongly denominational colleges." (pp. 144-145) In fact, analyses of organizational climate variables in which clustering was based on climate profiles of institutions -- not type of institution -- resulted in groupings, which replicate in large part the relatively conventional types (Stern, 1966, cited in Feldman and Newcomb). Some of the labels given the profile groupings were selective liberal arts colleges, selective universities, general liberal arts colleges, general universities, state colleges and other universities, teachers colleges, strongly denominational liberal arts colleges, and engineering and science schools. In other words, this classificatory typology appears to account for the major differences in climate profiles between colleges -- at least insofar as climate is measured by the College Characteristics Index. No comparable typology readily comes to mind for grouping high schools.

Thus, there are at least three features of colleges which might lead us to predict that they would have more differential impacts one from another than we would expect to find at the high school level -- greater variation in the types of student bodies served, greater variation in their institutional forms, and a more total encompassment of their students' lives. The last characteristic should lead to greater differences in impacts between various colleges because it tends to magnify whatever differential impacts they could have, even if they were less totally encompassing institutions.

It might also be added that the prestige of the particular institution attended carries much greater social significance at the college level (e.g., Harvard vs. Podunk Junior College) than at the secondary level (John Jay vs. James Miller), and that greater differences in long-term institutional impacts are likely to result from this fact, particularly for student outcomes such as occupational attainment or income. It is also the case that eventual social attainment may be influenced directly by the social connections young people establish in college; and, since colleges vary considerably in the social strata from which they are drawn, greater "institutional impacts" may be observed long-term as a result of this informal mechanism by which social connections of differential importance are likely to be made.

I have taken this aside to compare colleges and high schools, partly to place in perspective the potential applicability of the findings we are about to review on colleges for secondary schools. However, in the process of contrasting the two types of institutions, we have also begun to address some of the distinguishing characteristics of high schools as socializing institutions. We will return for a more in-depth consideration of this subject in a later section.

Existing Research. Under a grant from the Carnegie Foundation for the Advancement of Teaching, Kenneth Feldman and Theodore Newcomb surveyed and systematically reported on the enormous research literature dealing with college effects (Feldman and Newcomb, 1969, Volumes I and II). They located some 1500 empirical studies in the published and unpublished literature of the past forty years and attempted to cull from it the major consistencies and key findings. Although their work has been criticized for not being sufficiently critical in discriminating the good research from the bad (Astin, 1970), they certainly were cognizant of the serious methodological problems generic to that type of research and, in fact, went to some length to explore those problems. They stated in the opening chapter that

> Among the major obstacles facing the researcher in this field -- for college impacts are intricately multivariate -- are problems of methodology. Most of the older studies, and even many of the recent ones, do not take adequate account of the possible pitfalls. The resulting misfortune is not so much that their findings are wrong as that they cannot be interpreted: often one simply cannot judge whether impact can be inferred from the data. (p. 2)

Feldman and Newcomb discuss just what some of those methodological pitfalls are at several points in their volume, and they will be integrated here with a summary of some of the key findings in the field. They are of particular interest for our present purposes because many are applicable to research on high school impacts as well. The three key problems they discuss have to do with inferring general college effects from research data, inferring differential college effects, and measuring true change.

Inferring General College Effects. Feldman and Newcomb note that many studies surveyed used comparisons of simultaneously-measured freshman and senior class data. Inferring college impact from differences between the class averages is a risky business from several standpoints. First, some considerable fraction of freshmen leave school before senior year, so the observed differences may simply reflect selective losses of respondents over the period. A longitudinal research design avoids this pitfall.

Second, observed differences between the two age groups may not be due to the differing amount of college they experienced, but rather to other factors related to the slightly different periods in history during which students in the two classes grew up. Exceptional historical events such as a war or depression may have affected attitudes or values in different ways or, to use a more straightforward example, college admissions criteria may have changed over the four years. Repeat studies are needed to deal with these possibilities.

Finally, even if the inference is correct that certain shifts during the college years do reflect true change -- whether assessed by longitudinal studies or by comparing freshmen to seniors -- such change may not be a result of attending college. It could, for example, reflect fairly universal maturational changes for young people of that age or even changes which are occurring among all age groups during that historical period.

Only a study having comparison groups of young people who were not in college -- and better yet, young people not in college who are comparable in most other ways -- can indicate unambiguously whether general college effects can be inferred from the findings.

In sum, deducing general college impacts, even with carefully conducted longitudinal studies on representative college populations, has its problems; but the many studies using freshman-senior comparisons are on even weaker ground. Though Feldman and Newcomb do not emphasize the point, it might be added that the vast majority of the research findings in the field -- whether cross-sectional or longitudinal -- are not even based on representative samples of American college students. Thus it seems likely that even some of the findings which have come up "consistently" are questionable in terms of their generalizability to the universe of American college students.

Having stated these general qualifications concerning the shortcomings of most research designs, Feldman and Newcomb identified the following key findings about the general impact of college attendance on the psychological and social-psychological characteristics of college students:

> In terms of relatively consistent uniformities in net direction of change, some changes that are characteristic of nearly all American colleges have emerged. Most salient are increases in "open-mindedness" (reflected by declining authoritarianism, dogmatism, and prejudice), decreasing conservatism in regard to public issues, and growing sensitivity to aesthetic and "inner" experiences. In addition, a majority of studies show declining commitment to religion, increases in intellectual interests and capacities, and increases in independence, dominance, and confidence as well as in readiness to express impulses.(p.48)

These were the key findings to emerge from the research on college impacts in the following broad set of domains selected for review by the authors: values, educational and career goals, life satisfactions, attitudes and orientations (including economic, political, social, religious, intellectual, and authoritarian), intrapersonal and interpersonal adjustment (including autonomy, impulse control, masculinity-femininity, achievement orientation, sociability, and general psychological well-being), and vocational plans. This particular set of domains is fairly similar to the set of domains chosen by the Youth in Transition group for study at the high school level, in that it contains a broad array of psychological and social-psychological outcomes but deals rather little with academic achievement, either generally or within specific disciplines.

The authors conclude that even the consistent uniformities emerging from college studies which have been mentioned above, must be treated with caution because of the methodological weaknesses inherent in so many of the study designs -- in particular the freshman-senior comparison technique. The conclusions that changes occur in relation to aesthetic values (which become relatively higher) and religious values (which become relatively lower) are based on a substantial number of longitudinal studies; and are, therefore, among the stronger findings, though no control groups drawn from people of comparable age not in college were used.* The same holds true for the findings that authoritarian dogmatism and prejudice tend to decline in college.

On the other hand, many of the studies on intrapersonal and interpersonal adjustment, and many of those on attitudes toward political, social, and economic issues, are based on freshman-senior comparisons. This presents less problem when negative findings result, because true college impact would be expected to be reflected in freshman-senior differences (unless some offsetting process happened to be taking place); therefore, an absence of such differences probably reflects the absence of college impact. However, findings like the ones that seniors are usually more dominant, confident, assertive, independent and ready to express impulses than are freshmen, are of questionable significance. There is the possibility that these differences simply reflect selective attrition of students between freshman and senior years and, as in the case of the longitudinal studies, the possibility that such changes are simply typical of the age period. Both of these alternative explanations seem particularly plausible in this case.

In sum, we can say that from a truly vast research literature, Feldman and Newcomb were able to extract some intriguing findings on the effects which college attendance seems to have on American young people; but that because of methodological limitations, rather little can be said for certain. It is hard to come away, having discovered such a modest product from such a huge body of research, without the feeling that the scale and perspective of most of that research has been far below some critical mass needed to establish some "hard" findings. The criticism is not by any means unique to this particular area of social science research, but it is of no less concern because of that fact.

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* No consistent freshman-senior differences were found on the other value dimensions in the Allport-Vernon-Lindzey value scales, i.e., theoretical, economic, political, or social values.

Inferring Differential College Effects. As has already been mentioned, most college studies have been ill-equipped to distinguish college effects from simple maturational changes, because non-college populations have not been included in the research designs. What they might have been better equipped to do, however, was to compare the effects of colleges one to another and to try to determine what characteristics of the college or college experience seem to have consequence for particular student outcomes. It is this aspect of the research on college effects which most closely parallels the task addressed in the present volume on high schools.

Unfortunately, the body of research relevant to the question of differential college effects turns out to be disappointing, again because it suffers some of the same flaws just cited, i.e., fractionation and sub-optional scale in the research. Feldman and Newcomb stated " we have less to say in this area than we would ideally like. The reason for this is simple: appropriate research is sparse." They cite a slightly earlier observation by Astin and Panos (1966) as indicative of the state of affairs.

> Until very recently, comprehensive empirical studies of our higher educational system were virtually nonexistent; the body of research consisted mainly of an assortment of relatively unrelated studies by individual investigators focusing on their local institutions...Because of differences in measurement instruments, sampling techniques, and methods of subject identification, data from different investigations are seldom interchangeable, and the researcher initiating a new project typically starts his data from scratch [pp. 5-6]. (p.123)

Nevertheless, some studies have been conducted with larger samples of institutions and with some interesting results, and it is on those results that we will focus for the remainder of this section.

Feldman and Newcomb's major conclusion from the available literature on differential college effects is the following: that differences which characterize the student bodies at the start of college (i.e., freshman year) will tend to be accentuated by the end. We have already discussed the fact that student bodies vary considerably in their initial composition. The authors enumerated some of the empirically documented differences as follows:

> ...it turns out that certain types of colleges are in fact predominantly peopled by certain kinds of students. Academic capacity and family background (parental income, education and occupation), in particular, have a great deal to do with who goes where. Thus nonauthoritarianism, various intellectual

> dispositions, and political liberalism -- as well as high-status family background and high academic capacity -- tend to characterize, in decreasing order, students entering private universities, public universities, private degree-awarding colleges, public colleges of the same type, and junior colleges. The more prestigious the institution, the more likely it is to attract and to admit those students who have already most nearly attained the characteristics of "an educated man." (p. 144)

They go on to point out that

> ...colleges' distinctive impacts tend to be cumulative: the kinds of students they admit help to determine the kinds of impacts those students will confront. And insofar as faculty influences are adapted to the aspirations and capacities of their students, the process is reinforced. One would therefore anticipate that distinctive differences found among colleges in respect to their entering freshmen would become still more pronounced on the part of their graduating seniors. (p. 145)

The evidence on which they base this assertion comes from several empirical sources. Studies by Wickenden (1932), Nelson (1940), Trent (1967), Clark et al. (1972), and Morgenstern et al. (1965) indicate that students entering non-sectarian colleges show a greater decrement in their attitudes toward organized religion than their counterparts in sectarian schools, even though they were less favorable to organized religion upon entering college. Thus the between-group differences expanded over time when sectarian and non-sectarian schools were compared. Several studies are also cited (p. 142) which tend to indicate that between-school differences in political and economic conservatism are enlarged as students move from freshman to senior year. Unfortunately several of those studies are not longitudinal, but based on comparison of simultaneously-measured freshman and senior scores. The one longitudinal study, however, by Clark et al. (1972) did show that average gain scores on "civil libertarianism" were positively related to the average freshman scores on the same variable -- the higher the initial score in each of the eight schools surveyed, the higher the gain score tended to be.

Such movement is quite different than the artifactual gain scores one would expect if the process of regression toward the mean were operating. Under the condition of regression toward the mean we would expect those schools which initially scored low to show the largest gain scores and those which scored high to show largest loss scores (or smallest gain scores). Quite the opposite actually occurs.

Gurin and Katz (1967) demonstrated that colleges also tend to have "enhancement effects" on initial differences in the area of occupational aspirations. In a study of ten Negro colleges, they found that when the colleges were grouped according to their location on each of three different classificatory variables -- faculty-student interaction, diversity of extracurriculars, or student emphasis on academic values -- the subgroups showing the highest and lowest occupational aspirations initially were even further apart by the end of the first year of college. Parallel types of findings also have emerged in the area of student authoritarianism. (Brown and Bystryn, 1966; Clark et al.,1972; and Trent, 1967).

So, in relation to a small but important set of student outcome dimensions -- namely religiosity, political and economic liberalism, occupational aspirations, and authoritarianism -- the available evidence points in the direction of enhancement by colleges of the initial differences already present in the incoming classes of freshmen. The evidence is still rather thin, even in these areas, and it certainly would be risky to generalize freely to other student outcomes. Nevertheless, enhancement of initial differences seems to be the most consistent and major finding.

As we have already discussed, regression toward the mean is not of concern when student scores tend to diverge instead of converge. There are, however, some other methodological problems to be dealt with in trying to infer actual "college effects" from such findings. For example, an alternative explanation for the observed divergence during college is that persons with high initial scores are the most susceptible to upward change. If so, then individual explanatory factors are really what is behind the observed college level changes, not institutional factors.

Only one study (Dressel and Mayhew, 1954) could be cited which tested this alternative hypothesis, but the results were impressive. At the institutional level of analysis they found a slight accentuation of the initial diversity in the incoming freshman classes in a sample of 13 colleges. To explain such a shift on the basis of individual change scores, using the hypothesis just cited, would have required that the students having the highest initial scores would demonstrate the most gain, and presumably such a relationship should be observable among students within any one of the colleges as well as between them. The results, however, were quite the opposite; within any one college the students having the highest initial scores showed the least gains, not the most. So at least in this one case, the alternative explanation -- that there is a positive association between susceptability to change and the student's initial score -- was disconfirmed.

But another alternative to the "true college effects" explanation is harder to deal with; namely, that students entering different colleges already have differences which predispose them to differential rates of change during the college years -- differences in background, for example. As the theory goes, those same predisposing factors which account for the initial differences observable in freshmen year also account for the differential changes during college. To give a particularly plausible example, suppose that in the case of aspired occupational status, there is a tendency during maturation for such aspirations to move away from an unrealistic or even random set of choices toward a set of choices which tend to be more "in line" with the status of the student's parents; and suppose this process is continuing even during the college years. (Put another way, the correlation between aspired status and parents' status is increasing as the students get older.) If such were the case, then students in schools with higher than average aspirations initially would be expected to show higher than average gain scores as well, due simply to this individual-level maturational process, and such changes would not really reflect differential college "effects."

No evidence has been mustered to dismiss this alternative explanation, though the problem is approachable analytically. For instance, in the example above, the "moving into line with parental status" hypothesis could be tested by determining whether the correlation between student and parent scores increases over time. (It may not always be as easy to specify the alternative hypothesis as we did in this case, however.)

Measuring "Social Climate" and its Effects. So far in this discussion of differential college effects, the primary college characteristics of concern have been a particular type of student body characteristic: namely, the average initial or freshman score on the student outcome being studied. There are many other properties on which colleges can be classified. Among them are other student background characteristics and other types of input variables, such as the financial resources of the institution and the number and qualifications of the faculty. Characteristics of the organizational structure, existing organizational processes, prevailing social climate, and so on, are also logical candidates for analysis.

The absence of mention of such variables is no accident, since the Feldman and Newcomb review and other likely sources have little to report concerning research on the effects of such characteristics. There have been a number of systematic attempts to develop measures of the college "climate," but their use for predictive or explanatory purposes has been rather limited. However, because of the relevance of these studies to our present effort to conceptualize the high school environment, the work of the three seminal investigators in this field -- George Stern, C. Robert Pace, and Alexander Astin -- will be reviewed here.

George Stern and C. Robert Pace have both conducted (both individually and collaboratively) and stimulated a great deal of research dealing with ways in which the social environment of the college can be conceptualized and measured. (See Stern, 1970, for an up-to-date and detailed summary of the development of the measures and their subsequent use in research studies.) The major scales of interest in the present context are the College Characteristics Index (CCI) and the College and University Environment Scales (CUES). Both use students as the reporting agents and both were derived from the same pool of 300 items, except that different procedures were adopted for selecting from and combining those items.* The CCI conceptually organized its environmental descriptors around 30 psychological constructs, Henry Murray's 30 needs (Stern, 1970); while the CUES scales generated constructs based on the empirical relationships between the items based on student observations of their actual environments. (Pace, 1963).

CUES is comprised of five scales of 30 items each, which were constructed after the results from factor analyses and other considerations were taken into account. The resulting CUES "press" scales are entitled Practicality, Community, Awareness, Propriety, and Scholarship; and it should be noted that there are some moderately strong intercorrelations among them.

Unfortunately, despite the work which has gone into the development of the CCI and CUES measures of social environment, it appears that there has been relatively little use of them to predict student outcomes. Feldman and Newcomb (1969) do cite a few studies, but most of them use the needs reflected in the Activities Index as the student outcomes of relevance, which introduces some methodological problems. Stern (1966b), for example, found positive correlations between nearly all of the 30 CCI scales and their corresponding AI scales in a study of 64 institutions. The observed congruence, however, between student needs and environmental press could be artifactual and caused by shared measurement error, since the same respondents are providing both sets of data.* Even if valid, such relationships might be due to students selecting themselves into colleges where there will be a good fit, and not due to any impact of the college experience per se. Therefore, correlations between the reported press and the reported student needs in cross-sectional studies hardly sustain the contention that the differing environmental pressures have caused changes in the corresponding needs (preferences) of the students.

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* Originally an Activities Index was constructed to measure the strength of the 30 needs, the idea being that one's preference for the activities could be taken as a measure of the strength of the corresponding need. Some 300 activity preferences were included, ten to measure each need.

Another 300 items then were generated to measure environmental characteristics which seemed to indicate environmental "presses" of relevance to the 300 activities. The College Characteristics Index is thus intended to measure the environmental "press" for such activities -- including facilitating as well as impeding conditions. A college's press for achievement, for example, indicates its capacity for satisfying a student's need for achievement.

An example of an activity preference indicating need-achievement is "competing with others for a prize or goal," to which the respondent gives a like-dislike rating. An item intended to measure press for achievement is "The competition for grades is intense," to which respondents give a true-false rating.

One study is cited by Feldman and Newcomb, however, which builds a stronger case for college impacts as measured by the Activities Index scale. Using freshman-senior comparison, Pace (1961) showed that some of the differences in the ratings of activities are in the expected direction based on the relative "press" for such activities as measured by the CCI.

Only one study is cited in which college impacts related to the CCI or CUES scales were assessed in a longitudinal design. McDowell (1967) found that changes in favored subculture orientations (such as "collegiate," "non-conformist," and "vocational") between the fall and subsequent spring of freshman year were related to characteristics of the college environment as assessed by CUES. College emphasis on Awareness and Scholarship were negatively related to change in the direction of a "vocational" orientation; emphases on Practicality, Propriety, and Community were related to change away from a "non-conformist" orientation; and emphases on Propriety were related to change toward a "collegiate" orientation. The long-term importance of these student outcomes is not at all clear, however.

Alexander Astin is still a third investigator who has made substantial contributions to the task of conceptualizing and measuring the college environment. With Holland he first developed the Environmental Assessment Technique (Astin and Holland, 1961; Astin, 1963), which was comprised of eight rather straightforward measures: size of the institution, measured intelligence of the student body, and the proportion of the students in each of six categories of major fields ("intellectual," "realistic," "artistic," "social," "conventional," and "enterprising"). The classification of the major-field choices was based on a theory of personality types developed by Holland (1959b, 1966) and as such were considered important as personality descriptors of the student body.

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* Other studies which used teachers and administrators as the respondents on the CCI still found such relationships, however. See Chickering 1966b and Chickering et al., 1968.

Astin subsequently developed a more comprehensive set of six, empirically-derived measures of institutional attributes (Astin, 1962). By factor analyzing the data from 335 institutions of higher learning on some 33 major attributes (including faculty, student, and monetary inputs and structural characteristics), he came up with six principal dimensions: affluence (including student and faculty "assets"), size, public vs. private control, masculinity vs. femininity (including the percent of males in the student body), homogeneity (of curriculum majors), and technical (or realistic) emphasis.

The six environmental measures developed by Astin (1962a) and the eight measures comprising the Environmental Assessment Technique (Astin and Holland, 1961, Astin, 1963) have been used by Skager, Holland, and Braskamp (1966) to predict changes in student goals and self-ratings. Students were asked as freshmen and then again as sophomores to rate themselves on two dimensions of self-concept, "popularity" and "scholarship." Answers were selected at both points in time on a four-point scale ranging from "below average" to "top ten percent," and change scores were calculated based on the four-point rating scales. Each of the college characteristics was then related to these change scores by means of rank-order correlations.* A similar procedure was then followed in predicting changes in the rated importance of three goals: "following a formal religious code," "making a theoretical contribution to science" and "becoming influential in public affairs."

While the importance of these student outcomes may be debated, as well as the relative value of the particular analytic procedure used, the fact is that some positive results did emerge in the relatively short time period which had elapsed. For example, based on data from ten colleges, changes on self-perceived popularity were negatively correlated with school size and negatively correlated with the proportion of students majoring in practical or technical fields. In contrast, proportionally high enrollment in humanistic and aesthetic studies related positively to upward changes in self-perceived popularity. Changes in self-reported scholastic ability related negatively to school size, selectivity of the admissions policies, per student expenditures, percent of students who are male, and proportion majoring in practical and technical fields.

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* The rank-order correlation was really an average of four component rank-order correlations. First, change scores for all students having a score of one in the freshman year on the self-rating were rank-order correlated with the college characteristic in question; the same was done for those having an initial score of two; and so on. An average was then obtained from the four rank-order correlations thus generated by the four groups.

Astin (1968) made still a third attempt at conceptualizing the college environment, again using empirical techniques, but this time using a much larger set of descriptors and combining them only within certain prespecified categories. Data on some 275 descriptors were gathered from 246 institutions, using an instrument called the Inventory of College Activities (ICA). Items in the ICA are descriptions of activities actually engaged in by the respondent personally (e.g., "amount of time spent studying"), or directly observed by the respondent, which Astin contrasts with "image" type questions like those used in the CCI ("This is a highly competitive environment") or personal student characteristics such as those comprising the Environmental Assessment Technique ("average intelligence of the student body"). In describing his undertaking as admittedly reflecting a kind of "shotgun" approach, Astin went on to say

> In brief, the task of defining the college environment is one of identifying and measuring those institutional characteristics that are likely to have some impact on the student's development. (p. 2)
>
> Our goal in designing the ICA was to identify as many environmental stimuli as possible that could be observed by undergraduate students and reported in a questionnaire. We tried to cover four broad categories of stimuli: the peer environment, the classroom environment, the administrative environment, and the physical environment. (p. 9)

Four factor analyses were conducted, one within each of the four broad areas of stimuli. Factor scores were then calculated for each institution and correlated with information available on the institution. Some 27 environmental factors emerged, more than half of which were characteristics of the peer environment. Among them were such descriptors as competitiveness vs. cooperativeness, student employment, involvement in the class, severity of administrative policy against drinking, and spread of the campus. The peer and classroom environments are characterized much more completely than are the administrative and physical environments, due primarily to the number and breadth of the items generated in each of the four areas initially. (See Astin, 1968, p. 119 for a full listing of the factors.)

One of the more important organizational characteristics for student outcomes was school size.*

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* The student outcomes listed here are considered to be "intermediate outcomes" in the Youth in Transition study, since they are not considered to be intrinsically important until their relevance to more ultimate student outcomes has been demonstrated.

> In the environments of large institutions, as compared with those of the smaller ones, there is little concern for the individual student, lack of involvement in the class, little familiarity with the instructor, greater competitiveness, and little cohesiveness. (P. 132)

Unfortunately, Astin's study did not have data on many more permanent student outcomes, so little can be said about the ultimate importance of these environmental factors. His primary conclusion was that college environments do show a remarkable diversity:

> Variations among the environments of the 246 institutions were measured in terms of the students' reports about the relative frequency of occurrence of each of the 275 stimuli. For many of these, the diversity within the sample of institutions was indeed remarkable, ranging from very frequent occurrence at some institutions to virtual nonoccurrence at others. These variations in environmental characteristics suggest that the types of changes that take place in the student during the undergraduate years may be highly dependent on the type of institution he attends. (p. 118)

This diversity, as we have discussed earlier, stands in contrast to the situation in high schools and it is due in considerable part to the wider variations in student composition at the college level as well as to the greater variation in institutional forms. (See Astin, 1968, pp. 120-130 for a discussion of the environmental differences observed between differing types of institutions. See also Feldman and Newcomb, 1969, pp. 130-132). This fact is noted again, since the greater diversities in student bodies and in institutional forms would lead us to expect greater organizational impacts at the post-secondary than at the secondary level. Admittedly, the research we have reviewed on college impacts does not unambiguously demonstrate differential and substantial impacts of colleges. However, there have been a number of consistencies in the findings -- generally indicating certain types of impacts and often suggesting that student composition has been the important determinant. But many other organizational characteristics of colleges have not yet received serious investigation, and many may yet turn out to be important. Whether parallel findings could be found at the secondary level is quite another question, however.

Assessing the General Effects of High School Attendance

Unlike much of the research on college students, little at the high school level has purported to assess the general effects of attendance vs. non-attendance. There are probably two major explanations for this fact. First, there is less interest inherent in the subject since whether or not to attend high school seems a less discretionary matter for most young people today than whether or not to attend college. In a sense the society has already decided that a high school education is a good thing for everyone, while the case is still being made for a college education. Second, due to the fact that high school attendance has become a sufficiently universal phenomenon in recent years, reasonably comparable groups of non-attenders cannot be secured for comparison purposes.*

Even among the college-age population it is questionable whether non-attenders can be found who are truly comparable in all respects to the attenders, since the decision to go to college must itself reflect some important differences between the two groups; but at least matches can be made on many of the background and ability variables known to be important. The comparable task at the high school level is complicated considerably by the fact that non-attendance has become such an exceptional behavior. Some of the best inferential evidence which does exist on the effects of high school attendance, however, comes from two longitudinal studies: one a part of Project TALENT (Shaycoft, 1967) and the other the Youth in Transition study (Bachman et al., 1971).

As will be described in greater detail below, Shaycoft found that in several areas of aptitudes and achievement there was a substantial increase in the average scores of high school attenders between ninth and twelfth grades, and that the increases were greatest in the curriculum related areas. Since no comparison groups of non-attenders were included in the study, definite conclusions cannot be drawn concerning whether these changes were actually due to attending high school per se, but an inference of that sort would probably not be unreasonable given the nature of the findings. National Assessment (Womer, 1970)is now cumulating information, derived from large-scale national samples of school attenders, which provides the same type of inferential evidence of attendance effects in a number of academic achievement areas. The data are not longitudinal and non-attenders are not included in the study, but cross-grade comparisons do show an increase in knowledge throughout the age range.

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* Bachman et al. (1971) estimate that only 20-25% of the age cohort of the males corresponding to the high school class of 1969 had left school before graduation, and that most of the attrition occurred during the high school years, not before.

Many non-achievement outcomes were examined in the Youth in Transition study and in that case there was a comparison group of non-attenders (drop-outs). Bachman and his colleagues found, in the main, that drop-outs did not change in ways which were substantially different from high school attenders, despite popular notions to the contrary. In areas as diverse as self-esteem, affective states, racial attitudes, delinquency, and a number of values, the drop-outs remained in about the same relative position throughout the high school years as they had held at the beginning of tenth grade. For the most part that meant they were somewhat worse off, but the important point is that they did not become more so. Therefore, at least for young people of the type likely to drop out, loss of the high school experience appears to have relatively little effect on a host of non-academic outcomes. However, whether a parallel statement could be made for the remainder of the students -- those not as drop-out prone -- remains an open question, since they may have a greater capacity to reap whatever benefits high school attendance offers.

Until such time as fully-controlled experiments are possible (i.e. with random selection of who will attend and who will not) the answer cannot be definitively given. However, if some school systems should try out earlier termination of high school as some critics have suggested, substantial evidence may begin to cumulate.

One last point is worth noting in this consideration of the general effects of high school attendance: it has to do with the way we conceptualize "effects." The effect of an experience is usually measured by comparing how people who have gone through that experience are different than they would have been had they not gone through it. Clearly then, whatever would happen in the absence of the experience has great impact on the resulting comparison. Therefore, if we assess the impacts of high school or college in these relative terms, as we have been doing, our assessment depends very much on what alternatives are available to young people who opt out of either or both experiences. In other words, the practical alternatives for non-attenders and the social meaning of non-attendance will in large part determine how that group changes or fails to change and, therefore, how the attenders compare with them by graduation time. Thus the "effect" of attending high school and/or college is inextricably tied to the social realities of the period for non-attenders. If drop-outs or non-attenders are socially stigmatized, the effects may be greater. If work roles, citizenship rights, and other rights and privileges are difficult for young people out of school to attain, then the effects of being in high school or college will appear more positive. In other words, the effects of high school, when defined by comparison to the available alternatives, can be increased or decreased -- rendered more or less important -- not only by changes in the high school experience itself but also by changes in the social realities for non-attenders.

In fact, there are those who argue (James Coleman among them) that the best way of improving education and socialization of young people is not by improving the schools, but by improving the alternative experiences which are available and then encouraging more youngsters to opt for them. The paradoxical implication is that teaching environments may not provide the most facilitative conditions for learning.

We consider next the subject to which most of the research at the high school level has been addressed; namely, the examination of the differential characteristics of high schools and the assessment of their relative importance for student outcomes. Unfortunately, no one has yet undertaken a thorough survey of this very large empirical literature comparable to Feldman and Newcomb's at the college level. Such an undertaking would certainly be a valuable contribution, given the size and complexity of the existing literature.

Although an informal review of that scale was attempted in the present study during the instrument development stages, the immense task of formally documenting such a review was simply beyond the scope and purposes of the present study. What will be presented here is a distillation of that part of the research literature which we view as of greatest importance and relevance to the present work.

Studies of Organizational Impact at the High School Level

The problems in this major research literature on secondary schools parallel in many ways those reviewed earlier in the college literature. There have been a great many studies, but for the most part they have focused on single high schools or small samples, have failed to control for important extraneous factors (often because of limitations in the size or composition of the sample), and have used a great deal of idiosyncratic instrumentation. Even when samples of reasonable size have been secured, often they have not been selected in ways which made them representative of any defineable population. In other words, research in this field has suffered from a fractionation of efforts into studies of suboptimal scale, an absence of integration of those efforts, and a lack of generalizability to the findings. Clearly, limitations of sample size underlie most of those problems, and until research funding of a different order of magnitude is available (or fewer studies of larger scale are supported with the limited funds already available), the problem will continue.

A very few studies, however, have been based on large representative samples of schools and thus offered an opportunity to unravel the many background, community, and school characteristics which are known to be severely confounded in natural populations. In this section, the primary focus will be on two of those, Project TALENT and the Equality of Educational Opportunity Survey (EEOS), the two landmark studies which stand out above all others not only in terms of scale but also in terms of their impact on educators, policy makers, and students of education. While there have been some other moderate-sized studies of high schools, some of which also will be considered in the sections to follow, certainly in recent decades Project TALENT and the EEOS study have held center stage almost exclusively.

Each really is a set of studies, in a way. Project TALENT has stimulated some secondary analyses, EEOS even more; and TALENT has also become a longitudinal as well as a cross-sectional study of high schools and their effects. In the sections to follow, these important spin-offs will be examined as well as the original works.

Project TALENT

In the late 1950's a very major and large scale survey of American high schools and high school students, entitled Project TALENT, was begun under the primary sponsorship of the U.S. Office of Education. The title of the original research proposal, submitted in 1957 by John Flanagan of the University of Pittsburgh, gives some idea of the major purpose of the study -- "An Inventory of the Aptitude Resources Available for the Nation's Needs in Professional, Technical, and Public Service Fields." The authors, by their own description, conceived of it as "a large scale attempt to determine optimal methods of identifying, developing, and utilizing human talent."

In addition to surveying the available talent resources and relating them to the vocational choice process, Flanagan and his colleagues sought to investigate one particular segment of the talent-producing institutions in the country--the high schools--with an eye toward possible improvements.

> Our educational methods, curricula, and policies must be reexamined to meet the many challenges of the space age... [but]...there is lack of a clear idea of what to change, since there is not sufficient detailed information regarding the educational practices and policies being changed. We urgently need the sort of census information about our schools that is taken for granted in business, labor, agriculture, and other important segments of our economy and society. There has not been adequate knowledge about the important characteristics of our American high schools. A comprehensive study in depth of a representative sample has been needed. Information has been required to determine the frequency and interrelationships of such important school factors as number of students, class size, expenditure rate, track system, number of books in the library, guidance and counseling programs, salary level, and faculty experience, to mention but a few. (Flanagan et al., 1962b, p. 1-1)

The investigators had hoped at the outset to be able to come up with such specific results that they could assess the marginal gains associated with incremental changes in school characteristics -- for example class size -- so that cost-benefit analyses might be possible. The results turned out to be less straightforward than they had hoped, however.

The student outcomes of primary importance in Project TALENT -- as the study title suggests -- were in the realm of academic achievement and abilities as measured by standardized tests, and this emphasis in particular distinguishes it from the Youth in Transition study.

> Many important school outcomes were measured or documented at the time the Project TALENT tests were administered. In addition to a comprehensive group of educational and occupational aptitude tests, the battery of tests included measures of mathematics and English achievement, reading comprehension, and information in such areas as physical science, biological science, social studies, and literature. Each school principal also provided a report of such things as the college entrance rate, absentee rate, drop-out rate, and delinquency rate for his school. (Flanagan, et al.,1962b, p. 1-9)

In all, there were sixty-four different cognitive scores based on achievement and ability tests and forty-five non-cognitive measures such as interests, personality traits, and background characteristics. (See Flanagan et al., 1962a, pp. 57-100)

Study Design. The design called for a very large national sample of high school students who were enrolled in grades 9 through 12 during the spring of 1960. Four longitudinal follow-ups of subsamples were also programmed to take place over the subsequent 25-year period; and, in fact a number have already been conducted at points corresponding to one, five, and eleven years after the graduation dates of each class.

The starting sample of students, which eventually turned out to number 440,000, was drawn using a stratified multi-staged sampling procedure. First, a sample of 1,063 senior high schools was randomly selected using a stratified procedure in which all high schools in the country were placed into strata based on their size and estimated drop-out rates. Differential sampling ratios were used for different categories of school size, and then, for the analyses to be discussed here, the data were reweighted to reproduce "a population of American senior high schools."*

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* Note that the basic sampling unit here is the school and not the student, the opposite of the Youth in Transition study. This difference is important to the composition of the sample of schools which will result, with the Project TALENT method leading to a much higher proportion of small schools (for example, 80% had a twelfth-grade enrollment under 100) and a higher proportion of rural and small town schools (estimated at 70%). (See Flanagan et al., 1969b, p. 2-5)

In all, some 1,353 public, private, and parochial schools agreed to participate in the study, an impressive 93% of those selected for invitation. The basic probability sample was comprised of 987 of these schools, 822 public schools and 135 non-public ones.

All grade 9 through 12 students in the selected schools participated in two days of testing and questionnaire completion. The school principals were mailed a General School Characteristics Questionnaire for completion, and nearly 100% responded after extensive follow-ups. A Guidance Program Questionnaire was also sent to each school requesting basic factual information about guidance resources, facilities, and so on; and a very nearly complete set of data was also secured on this instrument. Finally, all staff members who were judged to spend more than 20% of their time on student counseling were mailed a Counselor Questionnaire (response rates were not reported). No instruments were sent to the teaching faculty or the superintendent's office.

Information about the school characteristics and about the social environment of the school was elicited from all four groups of respondents, and it is this set of information which comprises the set of independent variables in the portion of the study dealing with schools and their impacts (reported in Flanagan, et al., 1962b). Little rationale is provided concerning the conceptual framework or theoretical orientation which gave rise to the rather lengthy set of school characteristics measured, so little more than an impressionistic description of the set can be given. Among the areas addressed, two received particular attention: (1) measures of the monetary, human, and physical resources of the school; and (2) measures of the counseling program and resources, in particular. Some structural variables such as school size, class size, grade structure, and ability grouping also received attention; but there was rather little treatment of organizational processes such as control and coordination, and virtually no attention paid to "social climate" characteristics such as norms, intergroup conflict, and so on.

Cross-Sectional Findings Regarding School Effects. Two major treatments of school effects have been reported in the considerable research literature produced by the Project TALENT investigators: a cross-sectional analysis of the initial wave of data, which is by far the most complete treatment of the data regarding schools (Flanagan, et al., 1962b), and a longitudinal analysis of a selected subsample of schools (Shaycoft, 1967). Since the latter comprises a major sub-study within the main study, it will be treated separately in the next section.

In the analyses of the original cross-sectional data, several different approaches were used to investigate the effects of various school characteristics. Unfortunately, in this author's opinion, all are fraught with serious methodological shortcomings and as a result some important questions remained unanswered. The first such shortcoming was that non-representative samples of schools were selected for separate analyses (or the schools were grouped prior to analysis) with the result that unknown portions of variance in both the dependent variables and the independent variables were removed from the analysis. The resulting impacts are very hard to gauge, although in each case some can be imagined.

In the first analytic approach, a special subsample of 206 public high schools was selected from the main sample, but all were in towns with populations between 2,500 and 25,000, i.e. small towns (Flanagan, et al., 1962b, Chapter 9). Thus rural areas were left out and, more importantly, all schools in small, medium, and large cities and most suburbs. This surely constricted the range on such other variables as school size, racial composition, socioeconomic level, and a host of other variables of unknown importance.

In any event, in this analysis the purpose was to assess the importance of some seventeen school characteristics in explaining twenty-two student outcomes. Eighteen of the latter were school averages of selected sophomore and senior test scores and the other four were based on estimates by the principals: absenteeism, school retention rate, college attainment rate, and juvenile delinquency. Working at the school level of analysis, the investigators intercorrelated those variables (along with eleven community characteristics derived from census tract data); and, using the resulting correlations, predicted to each of the outcomes separately in a stepwise linear multiple regression.

A number of important observations can be made about the zero-order correlations. First, at the aggregate or school level of analysis, the correlations generally tend to be much higher than at the individual level, which means among other things, that a factor may seem to be important when it is being used to explain differences in average outcomes between schools, but still not explain a great deal of variance in individual scores. Why? Because most of the variability between students occurs within schools, not between them. This fact is true in practically all work done on organizational effects, including the Youth in Transition study and the other major surveys reviewed in this volume, and it is important to keep in mind because it is particularly easy to inflate the importance of a finding based on aggregate level analyses simply because the correlations are large in absolute terms.

A particularly good example of the point may be found in the intercorrelations between the eighteen Project TALENT test scores used in the analyses just described. The set of intercorrelations among them is comprised almost entirely of numbers in the .80's and .90's. Therefore, at the school level, they are almost interchangeable; but at the individual level they are not.

Another point to be made about the total set of intercorrelations is that there is a high degree of association between the measure of socioeconomic level (the median family income in the Census tract) and the economic resources of the school. It correlates .54 with per-pupil expenditure, and .66 and .68 with the average starting salaries for male and female teachers respectively. This is one example, and perhaps the most important, of the many ways in which the characteristics of schools are confounded with the characteristics of the communities and regions in which they are located. Such confounding, which of course is not unusual in research in natural settings, presents one of the most serious methodological problems to confront researchers attempting to document the existence of "school effects" and to locate their specific determinants.

This confounding also makes it all the more important to accurately measure such community and regional characteristics, so that effects which are attributable to them are not mistakenly credited to school characteristics with which they might be correlated. The two measures of socioeconomic level used in the Project TALENT analyses, for example, probably do not measure the true socioeconomic level of the population being served directly by the school very well, since both are rather crude measures, as the authors admit, and also because they do not cross-validate each other very well (r= -.35 between the census tract median income and the percent of "low quality" housing the neighborhood served, as estimated by the principal).*

The methodological problems become even more important as the authors progress from the bivariate analyses to the multivariate, and I believe that the conclusions derived from some of those analyses -- some of the central ones in the book -- are very misleading. Basically, the authors identify as the "important" school characteristics, teacher salaries, amount of teacher experience, number of books in the school library, and per-pupil expenditure. ** These variables are so identified because they are "uniquely associated with school outcomes" (Flanagan et al., 1962b, p. 9-36), but the operational definition of "unique association" amounts to the variable receiving a reasonable Beta weight in a stepwise multiple regression in which all community characteristics and all school characteristics are entered at once. Knowing what we do about the levels of intercorrelation within and between these two sets of variables, we know for certain that a great deal of the variance in the dependent variables can be commonly explained by multiple predictors. Thus, in a single multiple regression this shared explanatory power is split among such predictor variables in unknown ways, and the Beta weights are affected accordingly. As a result, we are not able to determine from the multivariate statistics presented either the variance which the school characteristics can explain uniquely -- that is, over and above all variance explainable by community factors -- nor the variance they can explain in common with the community characteristics.

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* Since each variable does a better job than the other in relating to certain of the student outcomes, it seems likely that each has a valid component not reflected in the other.

** Note that all of these are variables which would gain in apparent importance if socioeconomic level were not fully controlled.

The commonly explained variance is important, as well as the uniquely explained variance, because it may be the school characteristics which have the causal impact and not the community differences with which they are confounded. In such a case, automatically assigning the common variance to the community characteristics would lead to a faulty conclusion.

In essence, what is being said here is that as a result of the analysis method used, some school characteristics may be identified as accounting "uniquely" for considerably more variance than they really do, and some may be dismissed as unimportant which really are important. Therefore, the following conclusions of the authors should be read with these many serious qualifications about the methodology in mind:

> ...variables as class size in mathematics and science, per-pupil expenditures, and total number of Grade 12 students did not have any appreciable unique variance for predicting any of the school test means used in this analysis. In this analysis a large part of the variation among schools in mean scores on both aptitude and achievement tests is accounted for by a very few factors, such as family income, quality of housing, teacher salary level, teacher experience, and books in the library (for English). The remaining unaccounted-for variation must be split among hundreds of different school characteristics. This is one reason it is so hard to measure and isolate the unique association of a single school practice with a measurable school outcome. The chances are the real unique relationship of the practice accounts for only a fraction of one percent of the total variation of the output measure being studied. (Flanagan et al., 1962b, p. 9-17)

The second analytic approach shared the more serious drawbacks of the first, i.e. the division of the total sample into more homogeneous subgroups for analysis and the use of a single stepwise multiple regression to assess the importance of the school factors. In this case, the total probability sample of public schools was divided into three subsamples -- one comprised of all vocational schools and all schools in cities of over 250,000 population (N=142), one comprised of all of the remaining schools in the Southeastern region (N=207), and one comprised of all remaining schools in the other regions of the country (N=461). Again, the total variance of both criterion and explanatory variables has been divided in important and, to a large extent, unknown ways.

Analyses were then conducted on each of those subsamples in exactly the same fashion as has been described above: that is, a fifty-variable correlation matrix was first generated, and a single stepwise multiple regression was then conducted in which the community characteristics and school characteristics were used in combination to predict each student outcome variable. Since the urban/vocational sample undoubtedly had considerably more variance in both its dependent and independent variables, it comes as no surprise that the community and school characteristics could explain considerably more of the total variance in that sample than in the other two. For example, the multiple R's resulting from predictions to eight test scores tended to average around .70 for the urban/vocational sample versus .55 and .48 for the other two samples. The differences were even more dramatic in predicting to the estimated rates of absence from school, school retention, college attendance, and juvenile delinquency.* In these cases the multiple r's attainable in the urban/vocational sample were all in the .90's, whereas the comparable values for the other two samples ranged from .34 to .67. Given the serious qualifications mentioned earlier about the analytic procedure used, these multivariate analyses do not shed a great deal of light on the question of whether particular school characteristics are or are not important in a causal way.**

Perhaps the most useful information resulting from these analyses resides in the correlation tables, where the degree of association between each school characteristic and the several community characteristics can be determined, as well as the degree of association between the school characteristics and the student outcomes, and the degree of association among the school characteristics. School dimensions which have no zero-order power of any importance can at least be eliminated at this stage.*** Similarly, some idea of the potential importance of the remaining variables may also be assessed.

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* It should be noted that the test scores were used as predictor variables in the analyses involving these non-test outcomes, and they figured prominently in the multiple r's attained.

** In fairness to the Project TALENT investigators, it should be pointed out that their work in this field was one of the pioneering efforts, and that in the intervening time a great deal has been learned about the power and pitfalls of the many possible alternatives for multivariate analysis.

*** It is interesting to note that school size was one of the variables which the authors described as "unlikely to be important" because it failed to "uniquely" associate with school outcomes. Yet school size has a correlation with the various tests which averages around .40. Surely such a conclusion is premature based only on the multivariate analyses described here.

The only school characteristics having low zero-order correlations with the tests (i.e. an average correlation below .20) were "number of hours per day on homework" and "percent with study periods." Those variables having the highest such correlations were starting salaries for teachers (average r around .55 with tests) as well as school size, class size in math and science, per-pupil expenditure, and number of books per student (all having average r's between .30 and .40 with the tests).*

Subsequent Longitudinal Analyses. The results of a special follow-up study conducted three years after the initial data collection provide probably the most useful information on school effects to come out of Project TALENT so far (Shaycoft, 1967). The investigators still did not emerge with any specifics concerning which characteristics of school are important educationally, but they did provide some evidence to suggest that there might be differential school effects in the ability and achievement areas.

In 1963 they returned to a fairly representative subsampling of 118 of the schools participating in the original study, and administered tests and questionnaries to all members of the senior class, most of whom had participated in Project TALENT in 1960 as ninth-graders.** Therefore, the study was longitudinal in nature, and contained about 6,600 students who remained in the sampled schools during the time period. Because only one day was available for test administration, the original TALENT battery was reorganized into six separate batteries, each overlapping the others and each including about half the original set of tests. Every school received one of these batteries.

In the subsequent analyses, several questions were addressed relating to school effects. (See Shaycoft, 1967, ch. 7.) The first was whether there was any change during the high-school years in the forty-three ability and achievement areas being remeasured. The answer was clearly in the affirmative, with average gain scores between grades 9 and 12 ranging from .26 to 1.16 standard deviations (based on individual variance in ninth-grade scores on each test). Shaycoft observed that the largest gain occurred in areas most directly addressed by high school curricula, suggesting that the high schools do play an important role in bringing about the observed changes.

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* These numbers are based on the correlations generated in the first analysis mentioned in this section, involving 206 selected high schools. Comparable correlations are not presented for the latter analyses of the three subsamples.

** Schools from cities with populations over 1,500,000 were not included in the retest "for administrative reasons."

The next question addressed was whether there were observable differences among schools in the amount of growth taking place -- a condition which would be necessary, but not sufficient, to prove the existence of differential school impacts. Again the answer was affirmative for virtually all of the forty-three ability and achievement areas measured. However, the importance of the between-school differences in the gains is debatable -- and perhaps not nearly as great as Shaycoft suggests (p. 7-10).

To control for the student's initial level of ability when he entered high school, Shaycoft analyzed residual gain scores, not raw gain scores. The residuals were created by using the grade 12 score with covariate control on the grade 9 score on the same test. Other investigators have demonstrated some of the potential problems of using residuals in analyzing the causes of change scores (see Davidson, 1972). One of the problems for our purposes here is that the use of residual scores makes it extremely difficult to estimate the importance of the between-school differences in change for the resultant twelfth-grade scores. There is no doubt about their statistical signficance, since all between-school comparisons of average residual gain scores were reported to be significant at the .05 level and, in fact, nearly all were significant at the .01 level and a great many at the .001 level.* However, the percent of variance explainable by school differences is not given, either for the gain scores or for the ultimate twelfth-grade scores. Thus, we cannot judge the magnitude or the importance of the potential school effects -- assuming for the moment that such differences do reflect school effects -- from Shaycoft's analyses, even though we know that they are statistically signficant.

It is possible, however, to estimate (based on the degrees of freedom and the F values) the proportion of variance explained. My estimates suggest that for about half the tests studied the between-school differences amount to less than 6% of the variance in the residual change scores and for the remainder of the tests, they account for between 6% and 18%. These numbers may sound reasonably high in absolute terms, but it should be remembered that the residual change is only a fraction of the total change, and that the total change constitutes only a relatively small fraction of the resulting twelfth-grade variance.** Therefore, the net proportion of the total variability in student scores which may be attributable to high school effects by the senior year appears to be quite low. If true, this fact may help to explain why Shaycoft was frustrated in her third major objective in the investigation of school effects -- identifying school characteristics which seem to "make a difference."

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* These tests were based on the F-ratios resulting from one-way analyses of variance in which the school was the variable of classification. The number of schools in each analysis ranged from 44 to 65.

** Shaycoft states that, "On some basic abilities, such as Abstract Reasoning and Reading Comprehension, it has been shown...that as much as 80 percent of the variance is apparently invariant during the high school years." (p. 9-5 to 9-6)

Shaycoft conducted "informal and exploratory" analyses, which she does not report in detail, to determine whether any of the school characteristics measured in the original Project TALENT survey related to "the very substantial inter-school differences in performance which had been demonstrated to exist." (p. 7-25) Presumably these analyses were of the twelfth-grade cross-sectional data, since the purpose was to determine whether or not it would be worthwhile to do an extensive, formal analysis of residual test score gains.

In briefly summarizing the results and their implications, Shaycoft (1967) stated:

> The results...were inconclusive. For instance there was no clear relation to be seen between test performance and such school characteristics as course offerings. Schools that reported a strong program in mathematics or in physical science (many courses offered, and strong requirements for graduation) were not especially likely to be among those that scored higher than average in those areas...
>
> ...the research reported in the present chapter suggests that schools vary in effectiveness in a great many dimensions, even though the specific school characteristics that produce these differential results are somewhat elusive. One reason they are so resistant to identification may be that they are elusive *inherently*, not just in the present context. In other words one of the crucial differences between an effective school and an ineffective one may be something as tenuous and resistant to identification on the basis of a questionnaire as the school's atmosphere -- the ambience it provides -- or some other concept equally hard to nail down. Vague though this concept is, it at least has the advantage of fitting the facts and providing an explanation for them. (pp. 7-24 to 7-25)

In sum, one comes away from the Project TALENT studies with the impression that a rather broad array of school characteristics, ones traditionally presumed to be important for student outcomes, were unable to account for any serious proportion of the between-school variation in student outcomes. As Shaycoft points out, many school characteristics, such as the social climate, were not examined; and, in addition, student outcomes of a non-achievement type were not included in the study. But within the realm of factors that were examined, little convincing evidence of differential school impacts could be mustered.

The Coleman Report on Equality of Educational Opportunity

In 1966 the United States Office of Education issued a report to the Congress and the President entitled On Equality of Educational Opportunity, which has subsequently become known as "the Coleman Report" or the EEOS study (Coleman, et al., 1966). It was submitted in fulfillment of a provision in the 1964 Civil Rights Act which instructed the Commissioner of Education to "conduct a survey and make a report... concerning the lack of availability of equal educational opportunities for individuals by reason of race, color, religion, or national origin in public educational institutions at all levels..." (Coleman, 1972). Such a survey was conducted under the direction of James Coleman.

It was a very major study, both in terms of scale and in terms of policy relevance. For both reasons, but particularly the latter, it has become the object of a great deal of controversy, so much so that innumerable articles and three full-length books have since been written about it (Mayeske, undated; Harvard Educational Review, 1969; and Mosteller and Moynihan, 1972). The central criticisms and key reanalyses presented in the subsequent literature will be summarized below, but first the purposes, design, and key findings of the original study will be presented.

Purposes. The general purpose of the study is evident from the Civil Rights Act citation above. Coleman described the more specific objectives of the study as being of two types: first to determine what constitutes "equality of educational opportunity" and second to assess the degree of equality in accordance with whatever definitions emerged. The first task was more of a conceptual than an empirical one, but in the view of the investigators perhaps the more important.

> ... the major virtue of the study as conceived and executed lay in the fact that it did not accept that [traditional] definition, and by refusing to do so, has had its major impact in shifting policy attention from its traditional focus on comparison of inputs (the traditional measures of school quality used by school administrators: per-pupil expenditure, class size, teacher salaries, age of building and equipment, and so on) to a focus on output, and the effectiveness of inputs for bringing about changes in output. (Coleman, 1972, pp. 149-150)

The investigators decided upon the following five conceptions of inequality of educational opportunity: (1) degree of racial segregation, (2) inequality of tangible school resources, (3) inequality of intangible resources, such as teacher morale, (4) inequality of inputs "weighted according to their effectiveness for achievement," and (5) inequality of output (Coleman, 1972, p. 147). The last, inequality of output, could constitute prima facie evidence that opportunities were unequal, it was argued. The fourth -- inputs weighted according to their importance for achievement -- gave rise to the work which makes the EEOS study of particular relevance to our present undertaking. To measure inequality in accord with that definition required some knowledge of which school factors were important for learning, so that the degree of inequality on those, in particular, might be assessed. Thus the resulting study was intended to measure the inequality of educational opportunity, as defined by all five approaches, for selected minorities in the population. The search for the most important determinants of school effects, in addition to being the aspect of the study of most relevance for our present purposes, also turned out to be the most controversial portion of the report.

Research Design. To accomplish the complex set of objectives just mentioned, it was decided that a large national sample of children (target size = 900,000) enrolled in various stages of public schooling in the United States should be obtained. It was further deemed desirable to have a non-white composition of approximately half the total, so non-white strata were over-sampled. The investigators decided that a sample of five grade levels from the twelve possible would be adequate for their purposes; grades 1, 3, 6, 9, and 12. For both administrative and analytic purposes they wanted the students clustered by senior high schools along with the respective sets of feeder schools, so a two-stage, stratified random sampling procedure was implemented to select 1,170 high schools. (See Coleman et al., 1966, pp. 550-554 for full details of the sampling methodology.) The feeder schools to the high schools agreeing to participate were then invited to join the study as well.

About 67% of the sampled high schools agreed to participate and mailed back the pupil questionnaires and tests which had been administered to the students by school personnel. Self-administered questionnaires also were forwarded to the teachers, principal, and superintendent through the school. Unfortunately, due to an administrative error, 131 principal questionnaires were not identified with a school number and were therefore unusable. Since they contained a great deal of vital information on the school, those schools were lost for most analysis purposes. The result was that there were only 689 high schools in the usable sample, or 59% of the original target sample. In all, there were 540,000 usable student questionnaires returned (of which about 40% were from minority students), 67,000 teacher questionnaires, and 4,000 questionnaires from principals (including feeder school principals).

The set of dependent variables in the study was comprised for the most part of measures of achievement and ability, as was the case in Project TALENT. For high school students there was a measure in each of the following areas: verbal ability, non-verbal ability, reading comprehension, mathematics achievement, and general information in five areas, i.e., practical arts for girls, practical arts for boys, natural sciences, social studies, and humanities. In addition, a few non-achievement student outcomes were measured, including attitudes toward school, problem behavior in school, study habits, educational plans, and a measure of one's belief in his ability to control his environment. The set of independent variables used as measures of the school and school experience will be described in the following section.

Analyses and Findings. Section 3 of the Coleman Report is the portion which directly addresses the question of school impact and will be the major focus of discussion here. However, the descriptive results emerging from Section 2, entitled "School Environment," provide some valuable information on the nature of American high schools; so the key points of that section will be reviewed briefly first.

Perhaps the most surprising finding about school environments was that minority groups were not found to be nearly as disadvantaged in terms of school resources as had been thought.

> In general, the differences show whites attending schools with greater resources, although this is not uniformly true, and perhaps the most striking point is the small size of the differences. The differences between locales (in particular, North-South differences, and to a lesser extent, metropolitan-nonmetropolitan differences) are for most resources strikingly greater than within-locale or national differences between schools attended by minority students and those attended by whites. (Coleman, 1969, p. 256)

They then looked at the differences to be found between the races in student composition.

> The most striking of these differences is the racial difference in student bodies of schools attended by the average Negro and the average white. This segregation is greatest in the South and greatest in elementary grades, so that the segregation is greatest at elementary grades in the South, next in secondary grades in the South, next in elementary grades in the North, and least in secondary grades in the North.

> Stemming fundamentally from this racial segregation, and from the lower economic and educational backgrounds of Negro students, the social and academic characteristics of the student environment experienced by the average Negro and the average white are very great -- greater in fact than differences in any other characteristics of their respective schools. (Coleman, 1969, p. 257)

Coleman and his colleagues (1966) found that 87% of Negro first-graders and 66% of Negro twelfth-graders attended schools that were more than 50% black.

Another, though less impressive, racial difference concerned the characteristics of the teachers serving the two groups. Black students, on the average, had a greater proportion of black teachers, teachers receiving lower salaries, teachers with lower scores on a verbal aptitude test, and fewer teachers with advanced degrees. The authors concluded that most of these differences could be attributed to the racial matching of teachers to students -- a matching which is most pronounced in the South and in the elementary schools, but which also exists in the other regions of the country and in secondary schools.

In looking at the achievement scores of the various racial and ethnic groups, which were separately examined throughout, they found that all such groups had substantially lower scores on the average than whites, with the one exception of Orientals. Further, the gap seemed to widen with the older age groups. Negro achievement scores went from about one standard deviation below the average of white scores in first grade to 1.5 standard deviations by grade twelve.

Section 3 of the report, entitled "Pupil Achievement and Motivation," presents the authors' attempts to determine the importance of school factors for student outcomes, and is the section which has elicited the most criticism, particularly of its methodology. Two basically different types of analysis were undertaken: first an assessment of the proportion of total individual variation in student outcomes which lay between schools (as opposed to within schools), and second, an assessment of the importance of selected school characteristics for explaining that between-school variance.

In both approaches, the focus of the analysis was not on the sample of students taken as a whole, but rather on ten subgroups taken separately: whites in the South, other whites, all whites together, blacks in the South, other blacks, all blacks together, Oriental Americans, Mexican Americans, Indian Americans, and Puerto Ricans.

The total amount of variance residing between schools sets an outer limit on the explanatory power of school characteristics. Differences between schools in average achievement tend to account for around 10% of the total variance by twelfth grade for all groups combined (16% for verbal ability, 12% for non-verbal ability, 11% for reading comprehension, and 7% for mathematics achievement). This reflects a decline from earlier grades, strangely enough, and the authors deduce from this fact that "the schools must have great uniformity insofar as their effects on the learning of pupils is concerned" (p. 296). In general, the proportion of variance accounted for by school differences is considerably greater for minorities than for whites and greater in the South than in the non-South. The authors deduce:

> ... at this point the indirect evidence suggests that it is those children who come least prepared to school, and whose achievement in school is generally low, for whom the characteristics of a school make the most difference. (Coleman, et al., 1966, p. 297)

They admit, however, that the evidence for this contention is only indirect, since factors other than the schools could account for the greater between-school variance among minorities.

After a preliminary look, the investigators chose verbal ability as the achievement measure upon which to focus in the more complex analyses. It showed the highest proportion of variance occurring between schools, appeared to be the most predictable from school characteristics, and had the highest average correlation with the other achievement measures. Coleman and his colleagues concluded that "ability tests" such as this are really more general forms of achievement tests, and they probably show greater between-school variations because they are less directly addressed by school curricula, which the authors suggest tend to be nearly the same in all schools.

Having determined the amount of between-school variation in achievement and ability, the next step was to determine the factors which might account for it. Four sets of school descriptors were used as the independent variables:

1. characteristics of the student's own family background* (including parents' education, intactness of family, size of family,

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* Note that socioeconomic composition was not included as a characteristic of the student body and that the parents' socioeconomic level is rather crudely approximated as an individual background characteristic. The net result of these "omissions" could be that these sets of variables are credited with less explanatory power than they might otherwise receive and other school characteristics, with which SEL might be correlated, are credited with more.

reading material and other items in the home, parents' interest in the child's learning, parents' educational desires for the child)

2. characteristics of the student body (including proportion whose families own encyclopedias, number of student transfers, attendance rate, percent planning college, teacher rating of student body quality, average number of hours spent on homework)

3. school facility and curriculum characteristics (including per pupil instructional expenditure in the school system, number of books in library, existence of laboratories, number of extracurriculars, size of school, degree of ability tracking, strictness in promotion, comprehensiveness, movement between tracks, accelerated programs, existence of guidance counseling, and urbanicity of school's location)

4. characteristics of the teaching staff (including the educational level of the teachers' parents, the teacher's own educational level, score on vocabulary test, proportion white, local background, and preference for teaching middle-class children)

As was the case with Project TALENT, there was almost no consideration of characteristics of organizational processes such as influence, coordination, conflict, integration, etc., nor were there any attempts at measuring the social climate and the quality of interpersonal and intergroup relations.

The analysis procedure was a fairly straightforward one. The first set of variables, containing the eight individual background characteristics, was entered into a linear multiple regression to determine how much of the variance in student achievement it could account for. It turned out to account for 22% of the between-school variance for all whites and 29% for all blacks.

Then an estimate was made of the proportion of total variance which each of the three sets of school variables could account for uniquely, that is, after the background variables had been credited with all of the variance that they could explain. This sequential procedure is important, and one of the more controversial aspects of the analysis approach, for it allocates to background characteristics any variance which could be commonly explained by either background or school factors.

> Since the student's background is clearly prior to, and independent of, any influence from school factors, these background factors can and should be held constant in studying the effect of school variables. (Coleman, et al., 1966, p. 330)

While it is obviously true that the background factors are "prior," it does not follow that school characteristics with which they are correlated cannot have effects which are causally independent of, yet statistically correlated with, them. The analytic method used here would credit any such "true school effects" to the background variables, and therefore it must be viewed as conservative in the direction of underestimating school effects.

Nevertheless, to proceed with the original analysis, the authors found for white students -- who constitute the vast majority of the school population -- that by adding all sets of school characteristics to the background variables, only about 4.2% could be added to the percentage of explained variance in verbal achievement in grade 12. Therefore, for the white population, even all of the school factors taken as a set were not found to be particularly effective for explaining differential student achievement.

Per pupil instructional expenditure (in the school system), perhaps the most widely accepted single index of quality, added only .8% to the explained variance for whites in grade 12 after the six background variables were controlled, and only 2.6% for blacks. The teacher/pupil ratio was eliminated at an early stage because it showed "a consistent lack of relation to achievement among all groups under all conditions."

For minority groups, the percentage of explained variance added by the school factors was larger. Among blacks, those factors jointly accounted for 13.8% of the variance, of which a substantial portion was attributable uniquely to student body characteristics. For example, even after controlling on student background characteristics and the set of variables characterizing school facilities and programs, student body characteristics added 5.9% to the explained variance for all blacks.

> Attributes of other students account for far more variation in the achievement of minority group children than do any attributes of school facilities and slightly more than do attributes of staff.
>
> In general, as the educational aspirations and background of fellow students increase, the achievement of minority group children increases. (Coleman, et al., 1969, p. 302)

Some of the characteristics of the teaching staff did show some noticeable relationship to pupil achievement among the educationally disadvantaged minorities. They appeared to have a cumulative "effect" for those groups, over the years of schooling, adding a greater fraction of explained variance (to that already explained by background variables) at each successive year. For all blacks, they added 9.5% to the explained variance at grade 12 versus .5% at grade 1. For these students, the verbal skills and educational background of the teachers seemed to be most important.

However, for the purposes of assessing school factors for the student population at large, which is primarily white, the thrust of the Coleman findings was that a limited amount of variance exists between schools to be explained in the first place, that a healthy portion of that could be explained by the differing types of students served, and that very little of the remaining variance could be accounted for by any of a host of school characteristics most commonly assumed to be important. They stated "school brings little influence to bear on a child's achievement that is independent of his background and general social context." (Coleman, et al., 1966, p. 325)

Such an assertion was disquieting to educators, to say the least, and did not go unchallenged for long. We turn now to a consideration of some of the major criticisms and reanalyses which followed.

Reanalyses and Major Criticisms. Since the Coleman Report was issued in 1966, a number of scholars have taken a more critical look at the major findings and the analysis methods which underlay them. A special Winter 1968 issue of the Harvard Educational Review, devoted to the Report and the questions it raised,was subsequently expanded and published in book form (Harvard Educational Review, 1969).

The following year a faculty seminar was organized at Harvard by Daniel Moynihan and Thomas Pettigrew for the purpose of reexamining the original data. An edited volume of papers by the participants in the seminar, many of whom did reanalyses of portions of the data, was published in 1972 (Mosteller and Moynihan). Christopher Jencks, one of those participants, also published a separate full-length book based in considerable part on his reanalyses of the Coleman data and Project TALENT data (Jencks, et al., 1972). Finally, a separate team of investigators at the United States Office of Education undertook a major reanalysis of the school-level data and recently published the results (Mayeske, et al., undated).

While a lot of problems and criticisms have been raised in these various publications regarding the original study, few of the fundamental analysis results have been refuted. Mosteller and Moynihan, in summing up the results of the Harvard seminar papers, stated, "If the present volume poses a major disagreement with the findings, it is with how firmly and directly the major analytical questions have been addressed." (p. 36) In other words, to the extent there are major faults, they lie more with the variables measured and the research design used than with the analysis of the available body of data.

The severe non-response rate was one aspect of the design which received particular attention, but in an article assessing the importance of that problem for the basic conclusions of the study, Jencks (1972b) concluded:

> The most controversial conclusion drawn from the EEOS was that school resources had surprisingly little relationship to students' background and even less independent relationship to students' achievement. The validity of these assertions does not depend on obtaining *precise* estimates of the relationships in question....
>
> ...In order to reject the major policy conclusions of the EEOS, we have to assume that our estimates were off by factors of five, ten, and twenty, not a fifth, a half, or one. *There is no likelihood that selective participation could have introduced errors large enough to affect the policy implications of the survey.* (p. 503)

In summing up what he thought were the serious problems with the study, Jencks stated:

> There are a lot of serious problems in the EEOS data. Much of the data is probably inaccurate. Even when the data are accurate in their own terms, they often provide inadequate evidence about both the present state of the schools under study and the likely future lives of their alumni. In my judgment those who want to discredit inferences from the EEOS ought to concentrate on these defects and forget about selective participation, which is a rather minor problem by comparison. Conversely, those who wish to defend inferences based on the EEOS ought to deal more satisfactorily with doubts about the accuracy, adequacy, and relevance of the information collected, and not waste any more time proving that 65 percent response is adequate for most practical purposes. (p. 503)

In a separate article Jencks (1972a) concluded, after reanalyzing the EEOS data on Northern urban elementary schools, that Coleman and his colleagues were correct in arriving at two conclusions which had evoked particular skepticism, namely that the school resources available to blacks and whites were fairly comparable and that academic achievement showed very little relationship to school policies once family background and race were taken into account. Smith (1972) also concluded that school resources and policies were of negligible importance, based on a separate analysis of the data at the high school level which will be discussed further below.

Hanushek and Kain (1972) argued that the design and instruments did not provide a fair test of the importance of school resources. They considered the measures of inputs to be rather primitive, since the measures were either school-wide or system-wide; whereas the actual allocation of resources to individual students might vary widely within a school or system. Family background, which they argued was accurately measured for the individual, was thus advantaged in explaining individual variance. They also argued that education is a cumulative process and that contemporaneous measures of schooling are not as accurate indicators of past schooling as contemporaneous family characteristics are of family background. This results in a "bias toward a no-school effect finding."

Dyer (1969) was one of the most outspoken in questioning whether school resources really received a fair test of their potential importance to pupil achievement. He first faulted the selection of verbal ability as the student outcome on which school effects were to be demonstrated, and argued that outcomes more directly related to curriculum content, such as those Shaycoft used, might have yielded different results. Coleman and his colleagues did report that they selected verbal ability as the outcome most strongly related to school characteristics (presumably without background controls); but, of course, that strength of relationship might not have held if background factors had been partialled out first. In other words, if verbal ability was the most strongly related to the background variables of all of the test scores, that fact alone could have caused it to show high spurious relationships with all of the school characteristics which were related to those same background factors. An examination of the correlation tables (Coleman, et al., 1966, Supplemental Appendix) does in fact show that verbal ability was the most predictable outcome from background variables, at least among all twelfth-grade whites. So, Dyer's criticism may be a valid one.

In an exploration of what might be done with achievement measures, Dyer presented two very helpful tables summarizing which of the 45 school characteristics used in the Report had correlations higher than .20 with any of three such measures -- reading, mathematics, and general information -- at the individual level of analysis (1969, pp. 52-53). Twenty-six of the variables failed to reach that level of association in the data for any of the eight ethnic/racial/regional subsamples in grades 6 or 9: these he called noncorrelates. Among them were such important variables as school size, pupil mobility, pupil-teacher ratio, teacher's experience, teacher's highest degree received, teacher turnover, availability of guidance counselors, and school location (urban-rural). In other words, none of these variables could explain as much as 4% of the individual level variance even before background and demographic factors were taken into account.

Those variables which did meet Dyer's empirical criterion in any of the subsamples were labelled "correlates." The most striking fact about the correlates was that most of them were so identified because they related to achievement of the non-Negro minority samples -- not the white or black samples. There were only two correlates for Northern whites: the average verbal and the average non-verbal test scores of the students in the school. (Not surprisingly, given the similarity of these variables to the achievement measures, these turned out to be correlates in all of the subsamples.) Northern blacks had one additional correlate -- the comprehensiveness of the curriculum; and the Southern whites and blacks had four and six correlates, respectively.

These counts give a fair idea of the magnitude of the zero-order correlations which emerged at the individual level of analysis between student test scores and the set of forty-five school characteristics. They do not suggest that multivariate analyses based on curriculum related outcomes such as these would yield much greater school effects than did the verbal achievement measure -- at least not for the major subsamples of students (whites and blacks). However, the magnitude of the improvement which might emerge has yet to be demonstrated.

In addition to criticizing the dependent variable chosen for in-depth analysis by the original investigators, Dyer also faulted their decision to break the sample into a number of more homogeneous ethnic/racial subsamples for analysis, arguing that variability in both the explanatory and dependent variables was thus constricted, with the result that it became harder to demonstrate school effects. Recall that the analyses of Project TALENT data, conducted by Flanagan and his colleagues, were subject to the same criticism.

Finally, Dyer raised questions about the validity of some of the key explanatory variables -- a point made by other critics as well -- in particular per-pupil expenditure. After noting that this variable had been shown to correlate with parents' socioeconomic level (SEL) in previous studies, he pointed out that within the various subsamples studied in EEOS there was virtually no consistent correlation between per-pupil expenditure and SEL. This fact may be due more to the fractionation of the sample into homogeneous subsamples than Dyer realizes, however, for a look at the correlation between per-pupil expenditure at grade 12 for all whites shows a correlation of .11 with parents' education and a correlation of .22 with urbanism of background. Collapsing of all subsamples, not just whites, would undoubtedly improve the numbers somewhat, and a better composite SEL measure should increase them further.

Dyer also questioned the validity of the variable because the correlations between per-pupil expenditure and the various achievement measures tended to average around zero for each subsample (based on all five grade levels). Citing two previous studies (Mollenkopf, 1956, and Goodman, 1959), in which per-pupil expenditure correlated with achievement measures in the range of .30 to .50, Dyer concluded that the near zero correlations in the Coleman study for comparable relationships should be viewed skeptically.

However, it appears that the correlations from the other two studies are derived from school-level -- not individual level -- analyses, which makes a tremendous difference in the magnitude of the correlation which will emerge. In the Coleman data, the correlation between per-pupil expenditure and the school's average score on verbal achievement is .25 for the total sample of twelfth-grade whites. It would be considerably higher for the entire sample. Per-pupil expenditure also showed moderate to high correlations with other variables measuring inputs into the school (.68 with teacher salary, .44 with highest degrees received by the teachers, .31 with having guidance counselors, -.25 with student-teacher ratio, and so on). Therefore, Dyer's criticism of the validity of this variable seems overstated, although there undoubtedly is some slippage simply due to the fact that it reflects system-wide expenditures, not expenditures in the particular school studied.

Therefore, the most damaging of Dyer's criticisms seem to be that the sample was unnecessarily subdivided into somewhat homogeneous groupings for analysis and that the variable selected for multivariate analysis, verbal ability, may have been less sensitive to school influences than some of the achievement measures. However, it does not seem likely that either of these shortcomings would have had very serious consequences, since minorities make up a rather small proportion of the population -- therefore, merging them with the preponderant white majority sample should not make much difference to the results -- and since the achievement measures did not appear to relate very strongly to the school characteristics anyhow.

In a chapter in the Mosteller and Moynihan (1972) volume, Marshall Smith presented a particularly extensive reanalysis of the school data. His basic conclusion was that Coleman had actually overestimated the impact of schools, even though Coleman had credited them with relatively little differential impact as it was.

Smith discovered that the importance of family background characteristics had been understated in the original report when two objective measures of home background -- "parents' education" and "urbanism of background" -- were mistakenly replaced with two subjective measures in the analyses. The net effect was to reduce the proportion of between-school variance explainable by the background set, which allowed the school characteristics to gain more explanatory power. For example, he estimated that the correct background set would explain 64% of the between-school variance in verbal achievement for twelfth-grade non-Southern whites (vs. 59% for the incorrect set) and 30% for twelfth-grade non-Southern blacks (vs. 21% for the incorrect set). Put another way, of the 8.2% of the total variance which lay between schools in the non-Southern white sample, 5.5% was explainable using the correct six background characteristics, leaving a maximum of only 2.7% which could be uniquely explained by school characteristics.

Using the revised set of background variables as controls, Smith went on to estimate the unique contribution to explained variance which could be made by the set of variables used to describe the student body composition. For non-Southern whites he found that these characteristics added .8% to the total variance explained beyond what was explainable using background factors (rather than the 1.2% resulting from the original method), and for non-Southern blacks student composition added 5.6% (vs. 6.6% in the old method). (See Smith 1972, p. 272.)

One might argue that these are rather minor corrections, but it should be remembered that they are in the direction of making this set of school factors -- which Coleman stated to be the most important of the sets investigated -- even less important than originally reported. Further, Smith concluded that their extremely modest contributions to explained variance may not be due to "school effects" so much as to "school selection and assignment practices."

> At the 9th and 12th grades the variable showing the strongest overall relationship to achievement is *Percentage of Students in College Track*. Instead of directly measuring aggregate student aspirations, as the authors of the Report intended, this variable may measure school selection and assignment practices. (Smith 1972, p. 280)

I am in agreement with Smith on this, and also on what may be an even more important point -- namely, that the set of variables used to characterize the composition of the student body, which have been listed earlier, leave much to be desired. There are many potentially important characteristics left unmeasured.

> I must stress that my main conclusion is that the Report offers no evidence of an independent effect of student-body characteristics on individual achievement. *I have not concluded that this effect does not exist, but that the hypothesis is essentially untested.* (Smith 1972, p. 281)

Smith also reassessed the importance of the facilities and curriculum variables. He ended up concurring with the original Coleman conclusion that such variables have little explanatory power, either individually or collectively. Again, however, he states that many factors which could fall under the rubric "facilities and curriculum" may not have received a fair test in the existing research design. He argues that a number of important facilities may have been left out, that the quality rather than the quantity of such factors may be what is important, and that there is no way of knowing which students make use of which facilities.

The most convincing of his criticism, however, is that there simply may not be enough variance among the schools in these resources for them to show their potential importance.

> Since World War II a lot of effort has been made to equalize facilities. If this effort has been successful, any true causal relation between facilities and achievement will not be evident. If all schools have facilities sufficient for their students, small measured differences will show little relation to achievement. This criticism can be met partially by inspection of means and standard deviations and by the use of regression coefficients. But the effects of certain resources may not be apparent in the range of existing variation. Reducing the pupil/teacher ratio, for example, may make no difference until instruction can be really individualized, which might require a pupil/teacher ratio of less than 10:1. Because there are almost no schools in the EEO Survey with a pupil/teacher ratio lower than 10:1, however, the effect goes unnoticed. (Smith 1972, pp. 282-283)

He also notes a problem which applies to the analysis of all characteristics at the secondary level, not just facilities and curriculum: that the variables are confounded in unknown ways with assignment, selection, and dropout effects.

Smith looked last at the set of variables describing teacher characteristics, and again came out in basic agreement with the Coleman results.

> My overall conclusion is that variations in schoolwide teacher characteristics bear little relationship to between-school variations in student achievement. I arrive at this conclusion for two reasons.
>
> (1) Taken together the measured teacher characteristics independently (uniquely) explain very little achievement variance for any of the six groups...
>
> (2) Taken individually, few of the teacher variables demonstrate statistically significant relationships to achievement when any controls are introduced into the regression equations.
>
> (Smith, 1972, p. 310)

He did differ with the Coleman findings in that in his analyses the teacher characteristics set did not turn out to have a stronger relationship with verbal achievement than did the facilities and curriculum set. Nevertheless, in the main, his findings coincide with those of the original report.

While the Smith analyses may have corrected for some deficiencies in the original report, however, its own weaknesses should at least be noted. The basic problem was the same for Smith as it was for the original investigators, i.e. how to deal with variance which can be explained by more than one explanatory variable (or more than one set of variables). Smith used the Beta weight associated with each variable as the measure of its unique importance, with the other variables in the same regression run assumed to have been controlled. However, as Smith himself admits, the size of the Beta weights depend on how the regression procedure allocates shared variance to the different correlated predictors. In Smith's analyses, it looks like most of the variance jointly accounted for by background factors and school characteristics was allocated to the former. Whether such an allocation is a reasonable reflection of the true causal dynamics, however, is an unanswered question.

Perhaps the most telling statistics Smith presented were the ones in which he quantified the segments of jointly explained portions of the between-school variance to give an upper and lower limit to the importance of each set of factors. Table 1 presents the portions of total variance which can be explained by each of the three sets of school variables uniquely, and jointly in all possible combinations.

One can quickly see from the table that a good proportion of the total variance which might be accounted for by school characteristics (6.76%) can also be accounted for by background factors, which jointly explain 4.58% of the total 6.76%. (Derivation: 2.18% of the 6.76% was not commonly explainable by background characteristics; therefore, 4.58% was so explainable) Those portions which are either uniquely or jointly explained by student body characteristics are the portions showing the greatest reduction when individual background characteristics are controlled.

From Table 1 we can deduce what the minimum variance attributable to each set of school variables is (based on the variance it can explain uniquely after controlling for background characteristics) and the maximum variance attributable to each set is (based on all variance it can explain jointly as well as uniquely). This gives us a range of potential importance for each set.

The results are that the set of student body characteristics explains between .47% and 4.90% of the total individual variance; the facilities and curriculum set explains between .8% and 3.0%; and the teacher characteristics explain between .6% and 4.0%. Taken in combination, the three sets account for no less than 2.18% and no more than 6.76% of the individual variance among twelfth grade non-Southern whites in the sample.

Given that we know that the upper limits have to exaggerate the importance of the school factors examined to some degree, these figures suggest that whatever the "true effects" of these many school variables are, they are relatively small; and that basic conclusion is certainly consistent with the primary thrust of both the original report and the extensive Smith reanalyses. Whether the most relevant school factors were adequately represented in the variable set to begin with is a separate question -- and apparently the most serious one outstanding. However, given the study and the data it generated, the findings regarding the explanatory power of the measured school characteristics appear to be rather consistent: whatever the actual effects are, they are very small.

TABLE 1

Proportion of Variance in Individual Verbal Achievement Uniquely and Jointly Explained by Three Sets of School Characteristics*

(Based on Coleman Data from
12th Grade Non-Southern Whites)

Uniquely Explained By:	Without Background Controlled	With Background Controlled
Student Body	1.45 %	.47 %
Facilities and Curriculum	.95	.80
Teacher Characteristics	.92	.60
Commonly Explained By:		
Student Body and Facilities	.38	-.12
Student Body and Teachers	1.38	.30
Facilities and Teachers	.01	.00
Student Body and Facilities and Teachers	1.69	.13
TOTAL	6.76	2.18

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* This table is adapted from Table F in Smith 1972,p. 330.

Other Research

There have been many other, less comprehensive studies which have attempted to demonstrate school effects -- particularly effects attributable to per-pupil expenditure or its concomitants, such as teacher salaries. Many of these have been reviewed in overview articles by Lyle (1967) and Dyer (1969).

Rather little has come out of this literature to make a very convincing case for the importance of per-pupil expenditure, once student background characteristics have been taken into account. However, the methodological problems inherent in the task continue to leave ambiguity as to the actual facts. Lyle noted in his review article that per-pupil expenditure has seldom been measured directly, that many studies have faced the problem of having limited variability in the per-pupil expenditure observed, and that the problems of disentangling the effects of that variable from demographic and background effects have been serious.

From the research available, however, he concluded that the "unifying thread" was that "...socioeconomic factors, not expenditures per se, almost wholly determine school outputs." (p. 152) In other words, the smaller studies tend in general to support the Coleman and TALENT findings in Lyle's opinion.

Dyer (1969) attempted to marshall the best evidence available to show that resources are important for student achievement. However, most of the studies he cited leave a great deal to be desired methodologically and the results tend to be very ambiguous at best.

He cited three studies which he felt had shown that characteristics of the schools could account for differential outcomes in student achievement and cognitive development. The first was the Shaycoft work, cited above, which I already have tried to show gives very little evidence of differential school impact. The second was the Mollenkopf (1956) study of 106 schools which were intentionally sampled to be as diverse as possible, although it was not strictly speaking a national sample. However, as Dyer himself points out, once multivariate controls were introduced in this early study the results were, at best, ambiguous. In predicting the average verbal achievement scores of twelfth-graders, adding per-pupil expenditure to three demographic variables increased the multiple correlation rather little, from .60 to .67. Given the crudeness of the control variables -- region (South/non-South), urbanicity (rural/non-rural), and percent of fathers who were high school graduates -- and the very small improvement in explanatory power, these results can hardly be viewed as very affirmative.

The third study cited by Dyer as supportive of the "differential school-effects hypotheses" was one by Goodman (1959) based on data from 88 New York state school systems. Unfortunately the analyses are based on seventh-grade data, not twelfth-grade; but nevertheless, the major results were that several school characteristics had relatively high correlations with a composite student achievement score. Further, even after the average SEL of the student body was controlled, the resulting partial correlations remained moderately high. Two of the major school characteristics identified as being of potential importance were ones also identified by Goodman: per-pupil expenditure and number of staff specialists (such as guidance counselors and psychologists) per 1000 students. For example, per-pupil expenditure had a raw correlation of .56 with the composite achievement index and a partial correlation of .37. The comparable correlations for special staff per 1000 students were .24 and .12, while for teacher experience they were .56 and .37 and for a measure of "classroom atmosphere" they were .24 and .23.

However, recall that these statistics are based on school system level data, not individual level, with the result that the apparent importance of these variables is greatly magnified. For example, since we know that per-pupil expenditure has a partial correlation of .31 with student achievement at the aggregate level, we can say that less than 10% of the between-school variance can be accounted for uniquely by that variable (i.e. .31 squared). But if only 15% of the total variance in the composite achievement score lies between schools (probably not an unreasonable guess), then per-pupil expenditure uniquely accounts for less than 1.5% of the total variance (i.e. 10% of 15%). In other words, an impressive aggregate level correlation turns out to correspond to a much less impressive proportion of the total variance being accounted for at the individual level.

The second problem with the Goodman analysis was his failure to control for other non-school factors, in particular urbanicity. It seems likely from the Goodman data available that a complete set of controls introduced into individual level analysis would severely weaken the case Dyer was trying to make from the data -- namely, that substantially different outcomes in student achievement could be accounted for using certain school characteristics.

Thus, the assorted studies other than Project TALENT and EEOS do not seem to provide any compelling evidence which would allow us to dismiss their basically negative findings in the area of school resources. The case is not closed, perhaps, given the severe methodological problems which have plagued researchers in this area; but the preponderance of evidence seems to be on the side of there being no differential school effects of major importance at all -- let alone effects which can be traced to specific characteristics of the school -- at least in the area of academic achievement.

A number of writers have suggested, however, that the almost exclusive focus of researchers on cognitive skills and knowledge has comprised too narrow a conception of the purposes of schools; that perhaps school differences are to be found in the realm of non-achievement outcomes -- outcomes such as motivation to learn, social and emotional maturity, preparation for adult roles, learning to get along with others, and so on.

It has further been suggested that more definitive and perhaps more positive findings might emerge in this area if longitudinal designs were used, thus allowing change to be assessed directly, and also if a more complete characterization of the school as a complex social environment was undertaken. In other words what has been called for is an expansion of the domain of dependent variables of concern, an expansion of the set of explanatory variables, and the introduction of the time dimension into the research design.

We turn now to a consideration of the Youth in Transition study — which was conducted later than most of the work reviewed here and was thus able to build upon these earlier works and incorporate these suggestions. It is a longitudinal study, it focuses on a host of non-achievement outcome dimensions, and it examines a greatly expanded array of school characteristics. By the end of this volume we will get to see how much these elaborations actually change the basic thrust of the previous major findings in the area.

RESEARCH DESIGN

The Youth in Transition Study is a major longitudinal effort to assess the effects of several social environments (school, job, and family) on young men during the period of development from approximately fifteen to nineteen years of age -- or more specifically, from the beginning of tenth grade to one year after graduation from high school. The design centers around a national cross section of about 2,200 boys starting tenth grade in 87 public high schools in the Fall of 1966. The many types of variables in the study are summarized in Figure 1 and the sequence of repeated data collections is summarized in Figure 2.

Samples of Schools and Students

The schools and boys were selected through a multi-stage sampling design in such a way that the probability of a school's selection was proportionate to its size (i.e., the estimated number of tenth-grade boys); and a roughly equal number of boys (about 25) were selected from each school. Thus, if schools with over 2,000 students happened to account for 10% of all high schools in the country, but contained 30% of all such students, they would comprise roughly 30% of our sample of schools, not 10%. In other words the sample uses students and not high schools as the relevant sampling unit. The net effect of this design is to provide an essentially bias-free representation of tenth-grade boys in public high school throughout the United States.

Response rates must be considered at two levels. A total of 88 schools were originally invited to participate in the study, one in each of the Survey Research Center's Primary Sampling Units. An affirmative response was obtained from 71, and replacement schools in the same sample areas were secured for all but one of the remaining 17 schools. In the resulting 87 participating schools, 2,277 boys were invited to participate in the study. A total of 2,213 (over 97%)agreed to cooperate and provided essentially a complete set of Time 1 data.

Other Data Sources

In order to analyze the differential impacts of schools on these students and to compare the school environment to the alternative environment of employment, a great deal of information was needed about the school as a formal organization and social

FIGURE 1 MAJOR VARIABLE CATEGORIES IN CONCEPTUAL FRAMEWORK

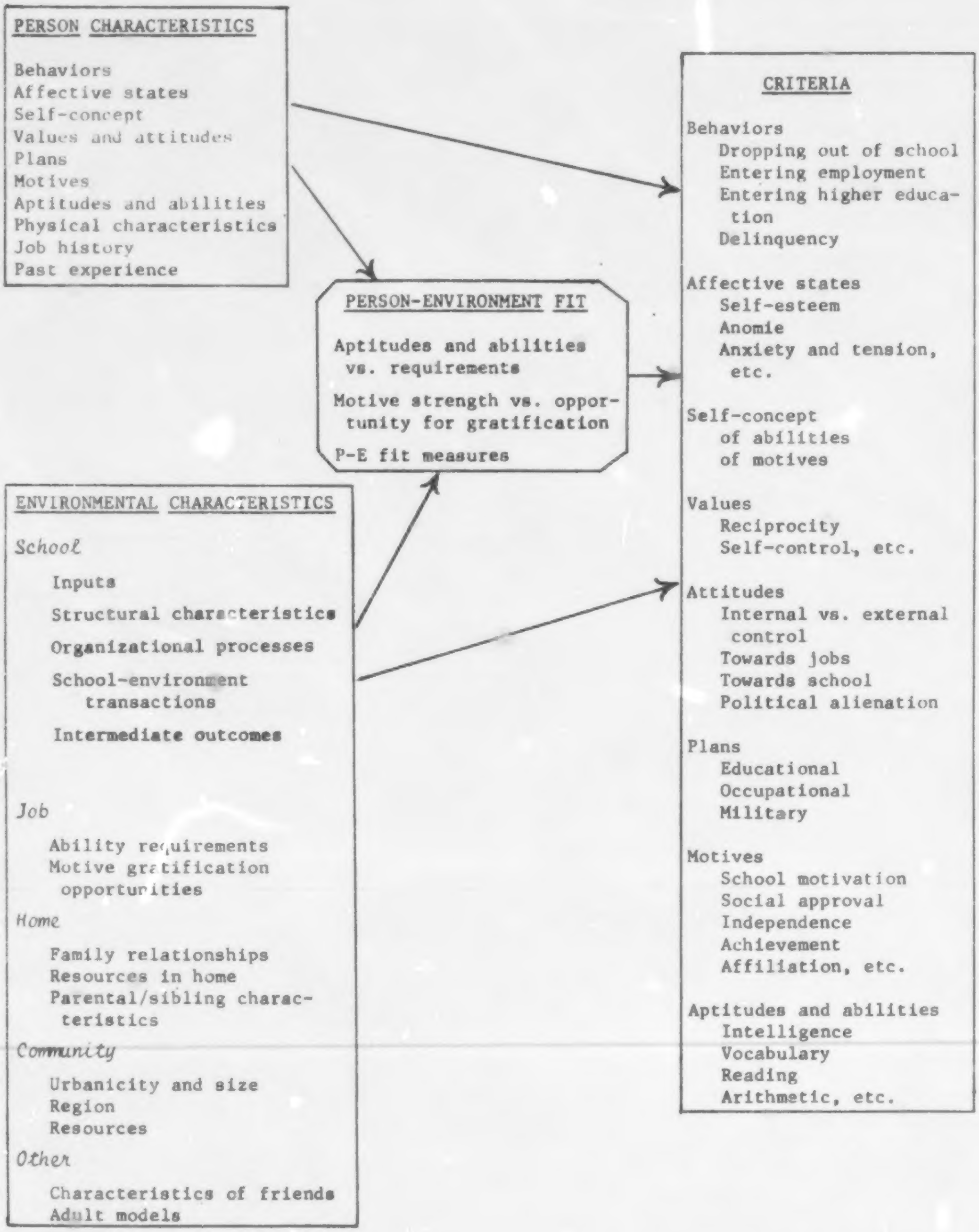
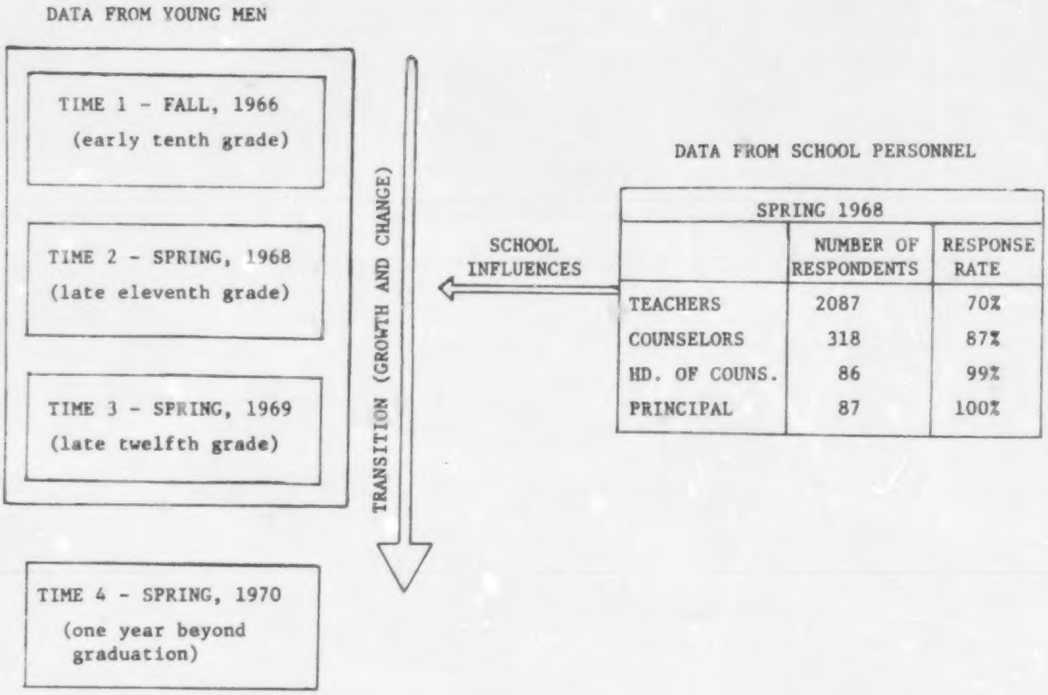

PERSON CHARACTERISTICS
Behaviors
Affective states
Self-concept
Values and attitudes
Plans
Motives
Aptitudes and abilities
Physical characteristics
Job history
Past experience
PERSON-ENVIRONMENT FIT
Aptitudes and abilities vs. requirements
Motive strength vs. opportunity for gratification
P-E fit measures
ENVIRONMENTAL CHARACTERISTICS
School
Inputs
Structural characteristics
Organizational processes
School-environment transactions
Intermediate outcomes
Job
Ability requirements
Motive gratification opportunities
Home
Family relationships
Resources in home
Parental/sibling characteristics
Community
Urbanicity and size
Region
Resources
Other
Characteristics of friends
Adult models
CRITERIA
Behaviors
Dropping out of school
Entering employment
Entering higher education
Delinquency
Affective states
Self-esteem
Anomie
Anxiety and tension, etc.
Self-concept
of abilities
of motives
Values
Reciprocity
Self-control, etc.
Attitudes
Internal vs. external control
Towards jobs
Towards school
Political alienation
Plans
Educational
Occupational
Military
Motives
School motivation
Social approval
Independence
Achievement
Affiliation, etc.
Aptitudes and abilities
Intelligence
Vocabulary
Reading
Arithmetic, etc.

FIGURE 2

OVERVIEW OF RESEARCH DESIGN: SCHOOL EFFECTS ON STUDENT GROWTH


DATA FROM YOUNG MEN
TIME 1 - FALL, 1966
(early tenth grade)
TIME 2 - SPRING, 1968
(late eleventh grade)
TIME 3 - SPRING, 1969
(late twelfth grade)
TIME 4 - SPRING, 1970
(one year beyond graduation)
TRANSITION (GROWTH AND CHANGE)
SCHOOL INFLUENCES
DATA FROM SCHOOL PERSONNEL

SPRING 1968		
	NUMBER OF RESPONDENTS	RESPONSE RATE
TEACHERS	2087	70%
COUNSELORS	318	87%
HD. OF COUNS.	86	99%
PRINCIPAL	87	100%

environment. Most such data were secured in the Spring of 1968 from the principals, teachers, counselors, and heads of counseling in the 87 schools. (In the case of teachers a random sample of 40 was taken in those schools having more than 40.)

All of these groups received mail questionnaires and a rather extensive effort was made to follow-up on non-respondents. The number of respondents and corresponding response rate for each of these groups are indicated in Figure 2. In addition to these four staff questionnaires, a great deal of data about the school environment was secured directly from the sample of boys in each of the first three data collections; but particularly in the second, which coincided in time with the staff questionnaires.

Data Base for the Present Volume

All faculty and staff members who responded to our mailed questionnaires were included in the analyses discussed in this volume. However, only a subset of the 2,213 young men comprising our original Time 1 sample were used in the analyses to be presented here.

To be included a young man had to have (a) participated in all of the first three data collections in the study and (b) remained in the same high school across that same time interval, i.e. from beginning of tenth grade until the end of twelfth grade. The first requirement was introduced because our intention was to assess school effects which were observable at the end of twelfth grade; therefore only students for whom we had Time 3 information could be used. The second requirement was necessary because we wanted to attribute to any given high school only those effects for which it clearly accounted, so young men who went to other high schools or dropped out had to be excluded from the data base for that high school.*

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* The one important exception to this procedure occurred when "student inputs" into the school were being measured by using the aggregated characteristics of our respondents. In such cases, where our purpose was to accurately characterize the student body, data from the full Time 1 sample of boys was used to avoid biases in specific schools which had excessive turnover or dropping out.

Table 2 presents the retention rates for the student panel over all four data collections. We consider the percentages to be very good for a panel study of this type. Nevertheless, the retained sample at Time 3 was 1,799, reflecting a 19% loss from the original panel. Another 425 individuals were eliminated because they had not remained in the same school, leaving 1,374 cases on which to base our analyses dealing with school effects.

Analyzing School Effects

The fact that longitudinal information is available on the students in this study means that more than one method for assessing school effects could be considered. Static scores on student outcome dimensions could be used, just as they are in most cross-sectional studies. However, change scores of several types could also be used.

After systematically exploring a number of the alternatives, we concluded that the most efficient procedure was to use only the Time 3 static scores in the initial analyses (Davidson, 1972). Any accrued effects of the school experience should be reflected in the Time 3 score and be statistically related to any school characteristics which accounted for them. Therefore, Time 3 static scores were used for the most part in the screening processes described in this working paper. Our expectation was that any school characteristics which relate to Time 3 scores could subsequently be checked for relationships with change scores.

Respondents as Participant Observers

Although some of the information secured from each set of respondents was about them as individuals, most of it concerned their perceptions of the school environment.* This basic approach -- using participants as informants -- has long been used in research on schools, as well as many other types of organizations. Although it is probably a far less reliable measurement technique for many types of variables than the use of trained non-participant observers, it is commonly used both because of the present state of our measurement science and the high cost of using trained observers. We feel it is still well worth using the

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* When there were multiple respondents in a role (as was the case for teachers, for example) the average of their answers were used as the observed value on any dimension for that school.

TABLE 2: RETENTION RATES FOR THE STUDENT PANEL

	DATE	N	% ORIGINAL SAMPLE	% T1 SAMPLE	INSTRUMENTS FEE; SITE; TIME
TIME 1	Fall 1966 Sophomore year	2213	97.2%	100%	Group tests,Group questionnaire Individual interview no fee; school; 4 hours
TIME 2	Spring 1968 Junior year	1886	82.8%	85.2%	Individual questionnaire Individual interview $2; neutral; 3 hours
TIME 3	Spring 1969 Senior year	1799	79.0%	81.3%	Group questionnaire $5; neutral; 2 hours
TIME 4	Spring 1970 One year post-grad	1620	71.1%	73.2%	Individual questionnaire Individual interview $10; neutral; 3 hours

technique, given present realities, though we look forward to the day when both the measures and the measurement technique can be improved.

As we shall see in a later section, by no means all of the concepts we attempted to measure suffered any limitation from the fact that participant-observers were the informants from whom the data were collected. Probably this information source was of greatest handicap in assessing the nature of the organizational processes in the school -- processes such as influence and control, program evaluation, and planning. However, many other classes of variables, such as satisfaction and attitudes, could not be as validly measured through any other informants than the participants themselves; and factual material about individuals and the school is likely to be comparatively accurate as well.

The Assumption of Constancy in Environments

At the inception of this study (early 1966) it seemed reasonable to assume that the school environments were relatively stable in comparison to the characteristics of the students passing through them. Thus, a research design was conceived which took a measurement of the high schools at a single point in time, corresponding roughly to the midpoint of the interval during which our sample of students were in those schools. We reasoned that the information emerging from that single measurement would represent quite accurately the results we would have obtained a year earlier or a year later and, therefore, was a good approximation of the situation each student faced as he proceeded through all three years of high school.

Needless to say, the relative stability of conditions in the nation's high schools, which gave rise to the original assumption, changed rather markedly during the late 60's and early 70's. A great deal of student turmoil took place, there was a growth in teacher militancy in many areas, and as a result there were high rates of turnover in many administrative ranks. These developments suggest that a design which took repeated measurements of the high school environments, and which treated rates of change in those measures as organizational characteristics themselves, would have been preferable to the design we actually used.

Nevertheless, despite these discoveries of hindsight, we feel that sufficient stability did exist in most of the schools along most organizational dimensions that the way we ranked them based on our single midpoint measurement would approximate rather closely the way we would have ranked them had we averaged across three different staggered measurements.* In other words, we doubt that many of our analyses of the effects of school organizational characteristics would change substantially had we not made the constancy of environment an assumption. Likely the most serious consequence has been that we omitted some variables, dealing with important changes taking place, which might have given more explanatory power to school characteristics than we were able to achieve.

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* One notable exception occurred in one of our schools in which the student body and staff were split and reassigned to other schools -- the original organization ceased to exist. This school was eliminated from all analyses, leaving a sample of 86 high schools.

CONCEPT AND INSTRUMENT DEVELOPMENT

The first major undertaking in our effort to investigate school effects was the development and selection of concepts and appropriate measures on which to dimensionalize schools. Our basic approach was a very pragmatic one -- namely to consider any and all school characteristics that we thought might "make a difference" for students, regardless of their sources or roles in existing theory. To commit all of our efforts to the testing of a single theoretical position at this stage in the evolution of the social sciences simply seemed a less than optimal strategy. That is not to say that theory had no place in these considerations, but rather that no one theory appeared to be sufficiently encompassing and well-developed to meet our needs. Our approach to instrument selection, therefore, was eclectic and involved both the adoption of existing instruments from a wide variety of sources and the creation of many new measures.

The Conceptual Framework

The metatheory of open systems, as applied to formal organizations by Katz and Kahn (1966), inspired much of our search for variables and ways to conceptualize them. A major focal area of the open systems approach is the interface between the system under consideration and the larger environment in which it is set, particularly on their mutual exchange of information, influence, and other resources. Through these exchanges systems capture or lose the control of resources, adapt or do not adapt, thrive or fail. In the case of schools, the characteristics of the population served are important aspects of the environment, as are the community and parental support of the schools and the relationships between the schools and various receiving institutions.

In our development of a conceptual framework we also drew upon the conceptual classification of variables put together by Barton (1961) in a volume in which he was summarizing the dimensions previously used in research on colleges and high schools. Barton distinguished six basic classes of organizational variables and within each listed a number of specific variables which had been used previously. His classes were:

"External Characteristics"

a. Inputs
b. Outputs
c. Environment

"Internal Characteristics"

a. Social structure
b. Attitudes
c. Activities

The first group obviously relates to open systems metatheory in its emphasis on the interface between the formal organization and the larger environment. In the second set we found Barton's distinctions to be valid but less useful, so we did not incorporate all of them into our own conceptual framework.

Since the framework adopted was important to both the variable generation and data reduction processes, it is worth some further discussion at this point. Basically, five major categories of variables are distinguished, although there are important subdivisions within each of them, as Table 3 shows:

I. Inputs into the School

II. The Organizational Structure of the School

III. Organizational Processes Taking Place within the School

IV. The Relationship of the School to the Larger Environment

V. Intermediate Outcomes

VI. Outputs from the School - Student Outcomes

The intermediate outcomes are so labeled because a) it is widely assumed that they are variables affected by the prior sets of variables in the framework, b) they are often taken as "good" or "bad" conditions in their own right (the level of innovation or absentee rate, for example) and c) most of them derive their primary value or social importance from the effects they are presumed to have on student outcomes. However, by assigning them an intermediate status, we leave open to empirical test the relationship they actually do have to student outcomes to which we attach more ultimate importance.

The ordering of the five categories of variables within the framework is intentional and meant to correspond to a presumed level of primacy in a causal sequence. Other things being equal, we would tend to allocate any shared predictive power to variables occurring earliest in the framework. So, for example, if we were able to explain the same 10% of the variance on Scholastic Aptitude Tests by using either the socioeconomic level of the students (an input), or the size of the school (a feature of the structure), or the quality of the student-teacher relationships (an intermediate outcome), we would be most inclined to give causal primacy to the input variable. Why? Because we assume that the other two school variables may well share predictive power with the input variable either because they are simply intervening variables in the causal chain of events, or because they are correlated with the input variable in ways which have no causal connection to the student outcome.

A corollary principle is that the effects of the variables at each category are best tested by controlling for the effects of the variables in the preceding categories. This is certainly an oversimplification to which there are a number of common-sense exceptions. Nevertheless, it provides one technique -- and, we think, a fairly reasonable one -- for simplifying and specifying a set of analyses within an extremely complex system.

As it turns out, the conceptual framework we adopted was of most importance in its effects on the empirical consolidation of measures, rather than in its influence on the predictive analysis strategy. It affected the empirical data reduction process because larger constructs were only built within, not across, conceptual divisions. Therefore, if an important and perfectly valid construct could only have been empirically "discovered" and then constructed by looking across two or more of the six major categories, it would not have been so discovered using the procedures described in this working paper. This is an unfortunate but necessary price which is paid when one uses any conceptually guided system for data reduction, for surely no descriptive division of a complex phenomenon such as a social system can incorporate or be compatable with all possible ways of conceptualizing that reality. The framework we used was our best _a priori_ approximation from both a pragmatic and theoretical viewpoint. The major alternative to such an approach, which does not separate the dimensions into categories defined _a priori_ for separate analyses, is the one in which all variables being considered are placed into the same analytic hopper (i.e. a giant factor analysis) in the hope that something interpretable and useful will come out. We placed a low probability on the emergence of interpretable and useful products from such an approach, since it would undoubtedly be the case that emergent factors would contain variables which have cause and effect relationships one to another, common-cause relationships, and (given the number of variables we worked with) a considerable number would probably have sheer chance relationships.* Therefore, we decided that a conceptually guided analytic technique for data reduction, despite its potential drawbacks, was a far more attractive choice because it optimized the chance of finding factors or clusters which were interpretable.

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* The most interpretable factor, of course, is one consisting of variables which relate to each other because they share a common, unidimensional construct.

Table 3

Conceptual Framework for Organizing School Characteristics

PREDICTORS

I. *Inputs into the School (Quantity and Quality)*

A. Students

1. Region and Urbanicity
2. Many background characteristics including racial composition, percent male, socioeconomic composition,etc.
3. Community Facilities Available to students

B. Teachers, Counselors, Administrators

1. Number of each per student
2. Education, experience, sex of each set

C. Support Staff (Secretaries, monitors, teaching assistants)

1. Number per student
2. Paid or voluntary

D. Monetary inputs

1. Teacher & principal salaries
2. Per pupil expenditure

E. Facilities

1. Classroom space, double shifts
2. Ratings of physical surroundings
3. Counseling facilities
4. Quantity and quality of texts

II. *Organizational Structure of the School*

A. School size

B. Levels in the hierarchy

C. Existence of "self-renewing" roles

Table 3 (cont'd)

D. Division of labor

   1. Allocation of teaching, counseling, discipline, monitoring, planning, and administrative functions to various roles

   2. Team teaching

E. Degree of Ability Grouping

F. Basis for organizing (around subjects or programs)

G. Tracking into programs of study (college prep. etc.)

   1. Grade in which tracked
   2. Rate of cross program transfers (permanence of tracking)

III. *How the School is Administered (Nature of Organizational Processes)*

A. Influence and Control

   1. Distribution of influence across levels
   2. Total amount of influence in the school
   3. Basis of principal power over teachers
   4. Basis of faculty power over students
   5. Teacher evaluation
      a. Administrative time spent
      b. Perceived criteria for evaluation
      c. Methods used
      d. Perceived effects

B. Organizational Objectives

   1. Perceived objectives of the administration
   2. Teacher preferances for organizational objectives
   3. Teacher-administration disagreement over objectives
   4. Allocation of counseling resources to various types of students

C. Planning, Evaluation, and Self-Renewal of the System

   1. Time spent on planning and evaluation by area
   2. Rated adequacy of time spent
   3. Existence of self-renewal practices in the school/school system
   4. Support for innovation from various sources

Table 3 (cont'd)

D. Coordination and Integration

1. Coordination between teachers of sequential and simultaneous courses
2. Degree to which programs of study are integrated entities

E. Communication and Interaction

1. Awareness of performance (inter-role and intra-role)
2. Helping and support (inter-role and intra-role)

F. Leadership Characteristics

1. Administration's awareness of problems
2. Principal's interpersonal skills
3. Degree to which principal is an "initiator"
4. Principal's effectiveness at gaining board/ superintendent and parental support
5. Principal's receptiveness to teacher influence

IV. *School-Environment Transactions*

A. Decentralization of decision-making in the school system

1. Controlling organizational membership
2. Controlling task assignments
3. Controlling resource allocation
4. Controlling curriculum

B. Parental Concern with school functioning

C. Community Support for school system

D. Influence of outside groups

1. Local colleges
2. Political groups
3. P.T.A.
4. Teachers' associations

E. Degree of connectedness to:

1. Colleges (for placing graduates)
2. Businesses (for placing graduates)
3. Community agencies

Table 3 (cont'd)

        3. To affiliate with adults
        4. To self-actualize (i.e., use and develop valued skills)
        5. To take desired classes
        6. To participate in extracurriculars

    B. Teachers

        1. To self-actualize
        2. To affiliate with colleagues
        3. To get to know students well

    C. Counselors

        1. To self-actualize
        2. To affiliate with colleagues

VI. *School Reputation*

VII. *Individual Outcomes for Staff*

    A. Job and Career Satisfaction

        1. Teachers
        2. Counselors

    B. Satisfaction/Dissatisfaction with aspects of position

        1. Teachers
        2. Counselors
        3. Principal

    C. Role Overload

        1. Teachers
        2. Counselors
        3. Principal

    D. Turnover and Absenteeism (of teachers)

    E. Self-Esteem and Irritability (of teachers)

    F. Strength of Institutional Identification (of teachers)

VIII. *Problem Behavior*

    A. Expulsion and Drop-out rates

    B. Absentee rate

    C. Time spent on discipline

Table 3 (cont'd)

INTERMEDIATE OUTCOMES

(Intervening variables between the predictors
and the criterion variables in the study)

I. *Interpersonal and Inter-role Sentiments and Relations (Trust, Liking, Conflict, Respect, Approachability)*

   A. Teacher-teacher

   B. Teacher-counselor

   C. Teacher-administrator

   D. Teacher-student

   E. Counselor-counselor

   F. Counselor-administrator

   G. Counselor-student

   H. Student-student; also

      1. Peer norms
      2. Peer groupings
      3. Bases of peer status

II. *Amount of Innovation*

III. *Performance Quality of Role Occupants*

IV. *Quality of Counseling Program (rated by students and counselors)*

   A. For college-bound

   B. For non-college-bound

   C. For various sub-areas of counseling

V. *Opportunity Structure for:*

   A. Students

      1. To be independent
      2. To affiliate with peers

Instrument Development

As stated earlier, there were two major literatures and related bodies of research which were considered particularly relevant to the undertaking reported here -- the education literature and the literature on formal organizations. A major part of our procedure for developing instrumentation to dimensionalize the school as a social system, and also as a social environment, was a review of both of those literatures and an attempt to draw upon the best and most relevant portions of each. Measures so derived were grouped into the conceptual framework just described. When no measures could be found for key concepts in the framework, or when those found were considered to be inadequate, new ones were developed. Some of the major instrumentation sources from each field are cited below, followed by a summary of the areas in which new instrumentation was developed.

Contributions from the Education Literature. As the previous literature review section has already shown, our search of that portion of the education literature defined as most relevant -- namely the body of research dealing with school-wide characteristics at the secondary level -- resulted in the identification of just a few major studies which were broad in scope (Flanagan, et al., 1962; Coleman et al., 1966; McDill, et al., 1966) and a myriad of minor works which tended to focus on fairly limited aspects of the school, such as peer group influence, leadership style of the principal, etc. While all of the former studies were considered relevant and received careful attention, many of the latter did not, either because of their limited scope or the judged calibre of the research and research instruments.

Ultimately, our choice of concepts and instrumentation was influenced by many investigators in the educational research field. The Coleman Report (Coleman, *et al*, 1966) and Project Talent (Flanagan, *et al*, 1962) were the source of many factual questions asked of the high school principals in this study, as well as a number of questions asked of the occupants of other roles. The work by McDill and others (1966) on educational climates in high schools suggested several measures which were adapted for use in this study, including a measure of "parental press for involvement in the high school," which those investigators concluded was an important factor, and a number of measures of school climate which they in turn had adopted from the work of Stern (1962). (See also Stern, 1970.)

Measures of the basis upon which peer status is accorded in the high school were adapted from the classic work of Coleman (1961). The work of Bentley and Rempel (1964, 1967) in the area of teacher morale and teacher opinions also inspired some of the instrumentation used here, including an index of community support for the schools.

In sum, a great deal of our instrumentation was either adapted from or inspired by the work of previous investigators in the education field. The explanatory value attributed to various of the measures by those previous investigators naturally influenced which ones we chose for inclusion in this study. Again, our primary criterion for inclusion was the anticipated explanatory power of the variable for student outcomes.

Contributions from the Literature on Formal Organizations. Schools are only one type in the larger class of institutions known as formal organizations. Other types of formal organizations have received systematic study for many years by social and organizational psychologists as well as sociologists. Business firms have perhaps been given the most attention by scholars in this field, although military units, government agencies, unions, hospitals, and voluntary organizations are among the other types which have received systematic study. A general overview of this extensive field of scholarship may be found in Vroom (1969), Cyert and Mac Crimmon (1969), Katz and Kahn (1966), or March (1965).

Since high schools are themselves large-scale formal organizations, it seemed reasonable to suppose that characteristics found to be associated with effective performance and job satisfaction in those other settings might also be of importance in high schools.

Participative Management. The work of Likert (1961, 1967), which in turn draws on the research of many other investigators at the University of Michigan's Institute for Social Research, suggests that both productivity and employee morale are positively associated to a whole set of interrelated organizational characteristics, primary among them being participative management styles on the part of supervisors as well as "supportive" interpersonal styles. In fact, Likert characterizes organizations as residing across a range in this constellation of characteristics from System 1 (exploitive-authoritative) to System 4 (participative). Many of the questions used by Likert and his colleagues to measure these characteristics of organizational life have been adapted to the present study. They are included primarily in the teacher questionnaire.

Organizational Control. Work by Tannenbaum and his colleagues (Tannenbaum, 1962) on the distribution of control across the various hierarchical levels in formal organizations suggests that organizational effectiveness is higher when there is more control at all levels in the organization, i.e. more total control. Therefore, we included questions dealing with influence and control in questionnaires to all groups of respondents in this study.

Bases of Power. A related set of concepts -- the bases of power by which individuals influence others -- was drawn from the earlier contributions of French and Raven (1960). The questions ask the respondent to rate the importance of each of five factors in explaining why he complies with the demands of specified others. In this case, we asked teachers to report on the power bases used by the principal, and we asked students to report on the power bases used by their teachers.

Studies in colleges and various business settings have shown that job satisfaction and productivity are usually positively related to the amount of expert power and referent power possessed by the dean or supervisor. They are also sometimes negatively related to his legitimate and coercive power. The generalizability of these findings to high schools seemed well worth testing.

Role Overload. One type of role conflict addressed by Kahn and his colleagues (1964) in a major study of formal organizations was role overload. They found that role conflict, which was measured by asking a constellation of role senders how much change they wanted in the focal person's role behavior, was related to low confidence in the organization, high job-related tension, and low job satisfaction. We selected role overload as the type of role conflict which might be most problematic for teachers, and adapted several items from the earlier work of Kahn and his colleagues for use in our questionnaires. In this case individuals would report about the role overload in their own situation. The same set of items was also included in the questionnaires to principals and counselors.

Other Contributions. The concepts listed above are some of the major ones adopted from the literature on formal organizations, but a number of others certainly derive from that literature. Among them are concepts such as decentralization, coordination, planning and evaluation, and environmental transactions.

New Instrumentation Developed for the Present Study While few of the basic concepts dealt with in this research are new, a great deal of the instrumentation is. The following are some of the areas in which existing measures were felt to be inadequate to our purposes, and for which new measures have been created:

1. Transactions between the school and the larger environment (See the following items in the indicated instruments in Appendix A: Tchr. A 26,28; Cnslr. A 15,16; Hd. of Cnslg. 13, 15-22; Princ. 2F5,6.)
2. Degree of school system decentralization (Princ. 2B a-r)
3. Organizational structure of the school (Princ. 1G 8-10)
4. Tracking into programs of study (Cnslr. A10, E 1-5; Hd. Cnslg. 26-30)
5. Allocation of faculty and staff time (Tchr. K 10-15; Cnslr. D 1-10; Princ. 2C 9-13)
6. Organizational objectives of administrators and teachers (Tchr. G 1-14; Boys'Time 4 Q'aire G 4-17)
7. Planning, coordination and evaluation (Tchr. A22, C 1-3)
8. Self-renewing processes in the school (Tchr. K 7-10; Hd. Cnslg. 23, 31; Princ. 2H 1-21)
9. Teacher evaluation processes (Tchr. D 1-11; Princ. 2A 1-17)

10. Teacher job and career satisfaction
(Tchr. J 1-17, K 24-26, 31)

11. Inter-role sentiments and relations
(Tchr. A 13,14,19, 20, 23-25; Cnslr. A 19, C 1-3; Boys' Time 2 Q'aire Sec. F; Boys' Time 2 Interview B 23-25, 36, 37)

12. Opportunity structure for students and teachers
(Tchr. A 12,21, H 1-10, K 27-30; Boys' Time 2 Interview G 2B, 8C, 9C; Boys' Time 3 Q'aire H 8,9)

13. Quality, quantity and allocation of counseling services
(Cnslr. B 1-4, D 1-10; Hd. Cnslg. 1-4, 7; Boys' Time 2 Interview B 26-35; Boys' Time 3 Q'aire H 38-48a)

New questions were drafted for a host of other variables as well, but the list above summarizes the major new sets which resulted from our efforts.

The underlying general hypotheses which led us to include these measures are as follows. We predicted that schools would have more beneficial effects on their students to the extent that they actively seek to influence their environment; have local autonomy through decentralization; have organizational structures which locate responsibility for accomplishing particular objectives with specific persons; and minimize the amount of teaching, counseling, and administrative time used on secondary functions such as clerical work. We also selected the following as desirable characteristics: a high level of goal orientation; high levels of self-evaluation, planning and coordination among the staff; a structure which guarantees the continuation of self-renewing processes; a minimal diversion of energies into traditional teacher evaluation efforts; satisfied teachers and counselors; mutual respect and liking between students and teachers, teachers and administrators, and teachers and counselors; maximum opportunities for students and teachers to self-actualize; and more counseling time and a broad mix of counseling services for students.

Instrument Refinement The instruments initially selected or created to measure the many concepts outlined in the conceptual framework far exceeded the amount of instrumentation which our respondents could be expected to answer; so a first major step was to narrow the instrument packages considerably. After making large cuts based on our own intuition about which issues were most central for the study, we reorganized the questions into groupings which would make sense from the respondent's point of view. (The titles of the major subsections in each questionnaire are given in Table 4.) We then pretested the instruments with a few selected individuals from each role to be surveyed. These respondents were first asked to complete the questionnaire and were then interviewed to determine what they understood the questions to mean and what they intended to communicate with the answers they selected. As a result of this pretest, a number of revisions were made to clarify questions and the sets of answer alternatives.

A pilot test was then conducted using the resulting faculty and staff questionnaires in three Michigan high schools which were not part of the main sample. Respondents were asked to note problems and suggestions in the questionnaires as they completed them. They were also asked for estimates of the amount of time required to complete them.

Answers to questions in the pilot instruments were tabulated and examined for problematic distributions or excessive missing information. These results, in combination with the direct comments of the respondents, were then used to make final revisions in the instruments. The resulting questionnaires are presented in Appendix A to this working paper.

TABLE 4

INSTRUMENT CONTENT IN STUDY OF SCHOOL ENVIRONMENTS

TEACHER QUESTIONNAIRE

- General information about school
- Distribution of influence
- Planning, evaluation, and coordination
- Evaluation of teaching
- Innovation
- School objectives
- Opportunities for students
- Attitudes and feelings
- Sources of satisfaction
- Background and teaching assignments

COUNSELOR QUESTIONNAIRE

- General information about school
- Evaluation of counseling program
- School personnel
- Time allocation
- Student transfers among programs
- Background

COUNSELING PROGRAM QUESTIONNAIRE

- Guidance and counseling programs and facilities
  - Job placement
  - Student follow-up
- School testing program
- College preparatory selection
- Personnel input
- Continuing education of counselors

PRINCIPAL QUESTIONNAIRES

- School and community characteristics
- Enrollment and attendance
- School programs and facilities
- Characteristics of school staff
- Problem behavior
- Title I programs
- Organizational structure and processes
- Evaluation of teaching performance
- Role of the central administration
- Background and present role of principal
- General information about students
- Student government
- Curriculum and programs
- Teacher organizations
- Administrative functions and practices
- General information about faculty and staff

THE MAJOR DATA COLLECTIONS

The field procedures associated with data collections for each of the several roles surveyed are summarized in this section. The timing of the data collections and response rates for each role have already been mentioned under the earlier discussion of the research design.

Students

For the purposes of this volume it is useful to distinguish two relevant portions of the student data -- one dealing with major student outcomes such as affective states and important behaviors, and the other dealing with perceptions and feelings about their high schools. The latter set, dealing with perceptions of the school, contributed a large number of the independent variables in the study; most of these questions were asked at Time 2. The former set contained the major dependent variables in the study, and most of those variables were measured in all four student data collections. Thus we are able to calculate student changes on nearly 50 important dimensions of the sort listed earlier. (See the box labeled "criteria" in Figure 1.)

These criterion variables were for the most part measured in self-administered questionnaires which used fixed, closed-ended answer categories.* They were group-administered at Times 1 and 3 and individually administered at Time 2. However, the Time 3 measures on these criteria, taken at the end of twelfth grade, are the primary ones used in the analyses in the working paper. Table 1 indicates the setting, fee for participation, and type of instrument involved at each point in time.

After the first data collection, which took place in school during school hours, "neutral sites" other than the high school were used. The term "neutral site" was coined because they were deemed to have similar and hopefully neutral connotations for all types of respondents. (The school, for example, would not have neutral connotations for a drop-out.) These sites included library conference rooms, church basements, community centers, and the like, and were chosen for privacy and proximity to the respondents as well as for the neutrality of their connotations.

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* The content of these measures is not included in this volume, but may be found in other publications from the study (Bachman _et al_; 1970; Arscott, 1970).

Principals

The principals in the schools in this study were contacted on a number of occasions. Initially, of course, their approval was required to permit the drawing of student samples in their schools. Their cooperation was also needed to conduct the first data collection from boys in the schools. However, after that data collection they had discharged all commitments they had made upon their initial involvement with the study.

The principals were informed originally that we might return to request a special data collection from school staff, but no commitment had been sought nor received at that time. Therefore, the third major contact with the principals involved the request that we be permitted to send questionnaires to a number of their faculty and staff as well as to themselves. Fortunately, through an intensive telephone and mail effort, we were able to secure cooperation at this stage from all 87 principals. Since they had already provided a considerable amount of help and were being requested to provide a considerable amount more, we were indeed grateful for their continued willingness to cooperate.

Principals personally received questionnaires from the study on two different occasions. Both were sent by mail, contained return mailing envelopes, and were followed by personal phone calls by staff members in cases where there was no response. The first, referred to in Appendix A as Principal Questionnaire 1, was mailed out in the summer of 1967, and requested a fair amount of factual information about the school. The second and larger, referred to as Principal Questionnaire 2, went out in the spring of 1968 along with other staff questionnaires. It was organized into two parts in order to facilitate the delegation of those portions most appropriately assigned to an assistant or secretary. The principal was asked to fill out the other section himself.

Because the principal role has only one potential respondent per school and because that role was the sole source of a number of "vital characteristics" of the school, it was particularly important that the response rate from principals be high. Otherwise, a great many schools might have been eliminated from important multivariate analyses because they had data missing on certain key variables. So, an exceptional amount of effort was expended to secure high participation from principals, including a number of phone calls from Ann Arbor where necessary. As a last resort we secured information on key variables by interviewing the principal or an assistant on the phone. As a result of these efforts, we were able to obtain at least a critical core of information from 100% of the principals and the vast majority of the information from all but a few.

Heads of Counseling

The principal was sent an envelope containing a Counseling Program Questionnaire and return envelope; he was asked to give this to the head of counseling or to someone most familiar with the counseling program. (In two schools there were not any counselors, so the principal was asked to complete the questionnaire.) Again, an intensive follow-up effort was made which resulted in completed questionnaires from all but one of the schools.

Counselors

Role definitions are a little less clear-cut when it comes to teachers and counselors, since a number of people teach or counsel something less than full time and hold another role in the school with the remainder of their time. Therefore, an explicit definition of "counselor" was necessary in order to draw a sample for this study. The definition chosen was "anyone on the school staff who devotes one-fifth or more of his time to counseling activities." Thus, all full-time counselors and most part-time counselors were included under this definition. The actual procedures for securing names, distributing questionnaires, and following-up on non-respondents were the same for counselors as for teachers, and are described in the next section. All people who met our definition for a counselor in each school were included in our sample, and ultimately 318 or 87 % of the total sample responded.

Teachers

For the purposes of this study, a high school teacher was defined as anyone who was a full-time teacher in the school in question and taught any students in grades ten through twelve. Any individuals who fit the definition for counselor given above were excluded from the teacher sample. Full-time teachers who taught only in lower grades were excluded by definition.

Sample Selection. Using a careful and explicit procedure, and with the help of school staff members, our interviewers established a list of eligible teachers for each school and then followed a pre-established random sampling procedure for schools which had more than 40 in order to secure a random sample of 40. They also secured the list of all individuals who fit our definition of a counselor. In the vast majority of the schools, our interviewers were also permitted to secure the home addresses of those individuals sampled, which they then forwarded to our Ann Arbor office for use in direct mailing. However, in a few cases a different procedure had to be followed because of school policies regarding the release of staff addresses and/or names. (Figure 3 summarizes the field procedures in these exceptional cases.)

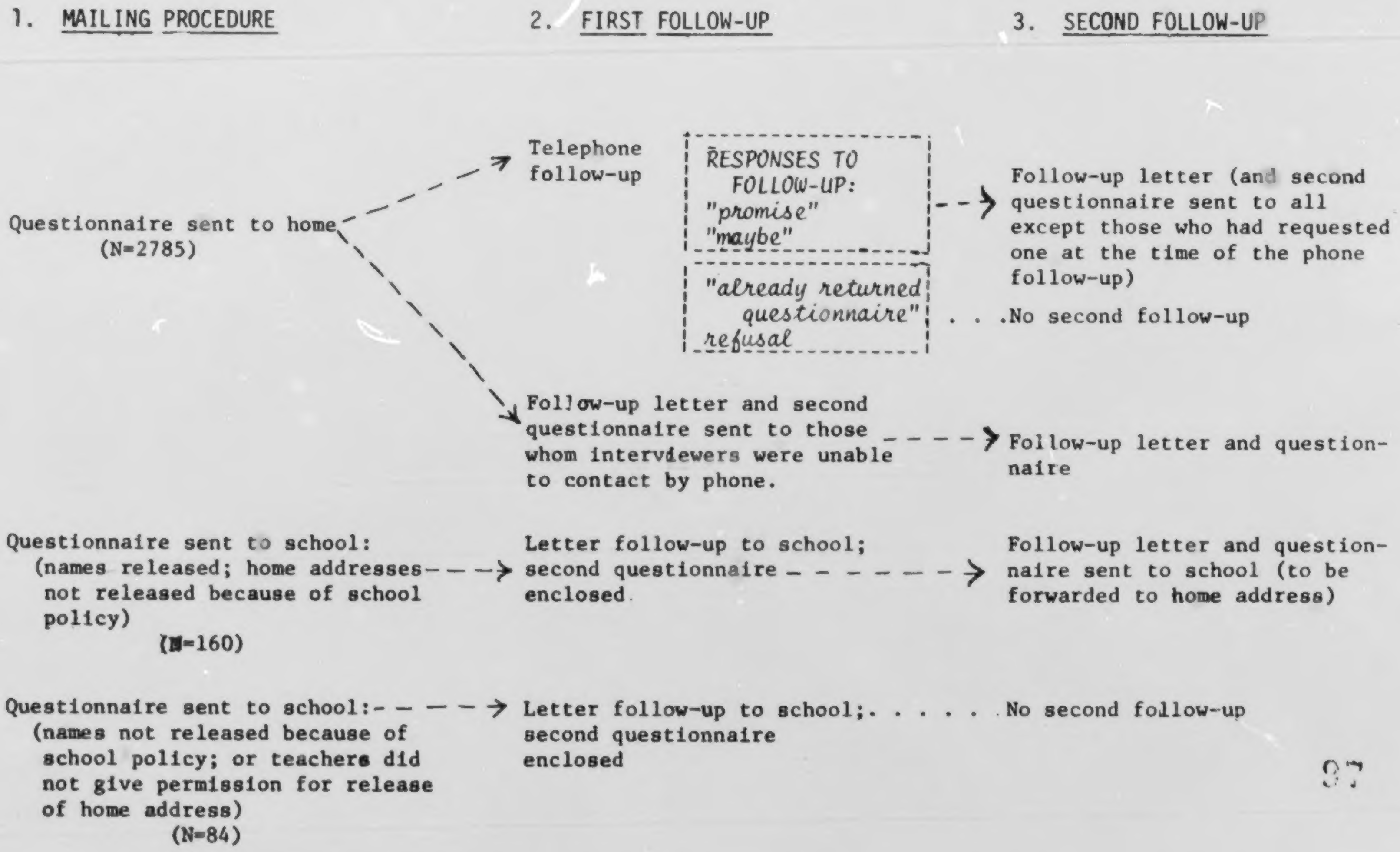
Advance Notification. Approximately a week before the teacher and counselor questionnaires were mailed from Ann Arbor, packets of brochures describing the study were sent to all schools. The principals were asked to distribute these to all teachers and counselors. Our intention was to notify potential respondents that they might be receiving a questionnaire, that it related to important research in which the school was involved, and that this mailing had the approval of the school administration. As far as we know, all principals cooperated by distributing these advance brochures.

Questionnaire Distribution. With the exceptions noted in Figure 3 , all individuals who fell into our sample of teachers or counselors had the appropriate questionnaire sent to their homes by first class mail. Included with each questionnaire were a letter inviting their participation, a flyer describing the study, a return envelope, and a return postcard. The questionnaires were not identified by name, only by school number. We were notified of the fact that a respondent had completed and returned his questionnaire by means of a separate postcard which was pre-addressed to the Survey Research Center and which contained the respondent's name as well as his school's number. In this way we could provide confidentiality to the respondent while still being able to determine which individuals had not responded. Our subsequent experience with these return postcards indicated that very few, if any, of the people in our samples returned these postcards without actually having returned their questionnaire as well.

Follow-Up of Non-Respondents. Approximately two weeks after the initial mailing of questionnaires to the samples of teachers and counselors, lists of non-respondents were drawn up for each school and distributed to interviewers residing near the schools. The interviewers conducted a telephone follow-up, in accordance with explicit instructions from the study staff, and secured information

Figure 3

QUESTIONNAIRE ADMINISTRATION AND FOLLOW-UP PROCEDURES


1. MAILING PROCEDURE
2. FIRST FOLLOW-UP
3. SECOND FOLLOW-UP
Questionnaire sent to home (N=2785)
Telephone follow-up
RESPONSES TO FOLLOW-UP: "promise" "maybe"
Follow-up letter (and second questionnaire sent to all except those who had requested one at the time of the phone follow-up)
"already returned questionnaire" refusal
No second follow-up
Follow-up letter and second questionnaire sent to those whom interviewers were unable to contact by phone.
Follow-up letter and questionnaire
Questionnaire sent to school: (names released; home addresses not released because of school policy) (N=160)
Letter follow-up to school; second questionnaire enclosed
Follow-up letter and questionnaire sent to school (to be forwarded to home address)
Questionnaire sent to school: (names not released because of school policy; or teachers did not give permission for release of home address) (N=84)
Letter follow-up to school; second questionnaire enclosed
No second follow-up

about whether each individual "definitely would", "probably would", or "definitely would not" respond. Those refusing (only 73 cases) were not contacted again. All others who did not respond after another interval of about two weeks were sent a second questionnaire along with a follow-up letter.

The follow-up procedures proved important, since only about 41% of the teacher sample had responded to the hour-long questionnaire by the time of the first follow-up. Another 23% came in as a result of the first follow-up, and an additional 6% as a result of the second follow-up. In all, 70% of the original sample of 3,029 teachers completed and returned the teacher questionnaire.*

RESULTING DESCRIPTIVE INFORMATION ON AMERICAN HIGH SCHOOLS

The above data collections yielded one of the richest collections of descriptive material currently extant on the American high school. Most of it is presented in Appendix A to this working paper. More discursive treatments and more complex analyses based on these data have been presented in several other publications from the study.

Previous Publications

A symposium was presented on much of this information at the American Educational Research Association Convention in 1969, and those papers were subsequently expanded into a working paper

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* Analyses were conducted to explore the nature and amount of bias we might expect as a result of non-respondents. (See Iman, 1969, who also gives a more detailed accounting of the field procedures discussed here.) The results indicated for the most part that there probably was not a great deal of bias related to non-responding, assuming we can generalize from the differences found between early, middle, and late responders. The only differences between these groups which were statistically significant were education level (lower for late respondents) and work overload (higher for late responders).

(See Johnston, et al, 1969). Among the topics treated are the use of teacher and counselor time, influence in the school, school objectives, teacher evaluation, teacher and counselor job and career satisfaction, and evaluations of counseling services. Factors associated with teacher and counselor job satisfaction were also explored, as were the factors associated with counseling programs which were judged by school personnel to be superior.

Two later works (Johnston, 1970; Johnston and Bachman, 1972) treated the subject of school objectives in considerable depth. Since comparable information was secured from both teachers and students concerning objectives in the high schools, it was possible to compare their positions. To our surprise, we found considerable agreement between teachers as a group and students as a group, both in the relative importance they thought was being accorded to some 14 objectives in American high schools and in the relative importance they felt each should receive ideally. We concluded that both groups would like to see more emphasis placed on the socialization and social-psychological development of students, areas which they currently see as getting the least emphasis. However, because they preferred to see less emphasis given to only one out of the 14 objectives --athletics-- it appeared that they were asking for a substantial increase in goal directedness in the schools as well as some shifts in priorities.

Future Publications

The formal characteristics of schools as organizations, and particularly the interrelationships among those characteristics, will be explored further in this study in the near future; and the results will be published in monograph form. The first order of business, however, was to relate all such characteristics directly to more ultimate student outcomes. That purpose, of course, is the main topic of this working paper, and the next section describes the process by which a host of student outcomes in this study were systematically related to the vast amount of information on the organization and social environment of the high school.

SELECTING AND CONSOLIDATING SCHOOL CHARACTERISTICS FOR PREDICTION

Predicting to student outcomes using school characteristics has already been mentioned as a major purpose of the Youth in Transition study and the primary one to which this effort is addressed. Therefore, once this highly diverse and comprehensive set of information about high schools had been gathered, the task became one of reducing it to a manageable size without losing whatever important predictive power might be lodged within it. Given that all early analyses working with school characteristics would be done at the school (aggregate) level of analysis, we effectively had 87 cases with which to work, which in turn meant that a "manageable" number of variables for multivariate prediction was in the neighborhood of 20.* Therefore, the task more specifically was to go from about 1,600 variables down to 20 and still end up with the maximum amount of valid, and interpretable explanatory power.

General Principles of Consolidation

A three phase procedure was adopted to accomplish this data reduction. All three phases used school (vs. individual) level data and shared certain basic principles for elimination and consolidation.

School Level Data Recall that the data were secured from a number of sources; boys, teachers, principals, counselors, and heads of counseling. In order to conduct analyses with the school as the unit of analysis, a single value for each school on each variable was needed. Therefore, a school mean value was calculated for each question to which there were multiple respondents. (Only principal and head of counseling variables had a single respondent per school.) For example, teachers were asked how much stress was placed on athletics by administrators in the school. An average of the answers given by all teacher respondents in a school was calculated and assigned to that school as its value. Not only does such a procedure narrow the information down to a single value per school, it is also likely to produce a more valid measure of the objective realities in that school, since it is based on more than one respondent-observer. We would expect that the error component of the measure due to individual biases and distortions would be smaller with a measure based on an averaging of answers, since the biases should tend to balance one another off when we combine the scores of a number of individuals.*

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* The basic problem is a common one in the study of most types of organizations. It obviously stems from the fact that the cost per unit (organization) to secure data is very high. Therefore, the number of cases available for analysis is always far less than one would like.

The information from all types of respondents was consolidated onto a single computer file of 87 cases (schools) containing roughly 1,600 variables. The variables were arranged into groupings according to the conceptual framework. It should be noted that some of these variables were indexes calculated on the original individual level files, but that such indexes were created primarily in cases where they had been empirically derived or validated in previous research studies.

Criteria for Clustering. At each stage in the variable reduction procedure a variable could meet one of three fates: (1) be combined with other variables into a higher order construct, (2) be kept separately, or (3) be dropped from further analytical consideration. Variables which did not meet certain criteria of predictive power (to be described below) and which were not clustered with other variables were dropped. Those which met the empirical criteria for clustering (also described below) were given equal weights and combined into an index which then was tested like any other variable for further clustering and for minimal predictive power.

Since one general purpose of the study was to produce practical suggestions for changing and improving schools, a strategy was needed which would allow an understanding of the social dynamics in the school. Therefore, the general approach was adopted of placing variables into a conceptual framework (see Table 2) which seemed meaningful in a theoretical and practical sense, and of combining variables only within major segments of the framework. Such a strategy would help to prevent the combination of variables which were statistically related due to chance or due to cause-and-effect or common-cause relationships. For example, we would not combine a measure of teacher salary (an "input" in the framework) with a measure of staff coordination (an "organizational process") even if they were correlated. Placing both into a cluster analysis or factor analysis might result in their both loading on the same dimension along with a number of other seemingly unrelated variables. One is then left with the problem of making sense of that factor and perhaps of suggesting what changes schools should make if the factor should turn out to be important. We concluded that the emergent constructs would be more interpretable and useful if they were built within the conceptual framework set forth earlier. *

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* We would expect the differences in the validity of the measures to be greatest between single and multiple-respondent data when the question asks for a high degree of individual judgment. Fortunately, most questions asked of the principals and heads of counseling, for which only one respondent per school exists, are of a factual nature.

At each stage of data reduction variables were examined within the groupings indicated in the conceptual framework. They were first examined in relation to the other variables in the specific subsection of the framework in which they were located, and then in relation to variables in successively higher level categories in the framework. Teacher salary for instance, was first considered for possible consolidation with other measures in the "Monetary Inputs" category. It met the necessary conditions to be combined into an index with the principal's salary. The resulting index was in turn examined for possible combination with other types of "inputs", not just "monetary inputs". The empirical criteria for further consolidation were not met, so that index stood as a variable and its individual ingredients were dropped from further consideration.

So far, we have been mentioning the empirical criteria for consolidation without actually having defined what they are. The following three criteria had to be met for items to be consolidated into an index -- the first two being fairly standard statistical procedures in the measurement development literature and the third being a little more unorthodox:

1. _Test for Convergent Validity_: the variables under consideration for clustering were required to show positive intercorrelations to demonstrate that they shared some higher order construct, (items stated negatively being reversed), and

2. _Test for Discriminant Validity_: the variables under consideration were required to be more correlated with each other than with other variables not considered to be part of the construct, and

3. _Test for a General Form of Construct Validity_: in order to demonstrate that the variables under consideration shared some higher order construct, they were required

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* This technique is similar in many ways to one used by Astin (1968) in building constructs which would be descriptive of college environments. Using school-level data from 246 institutions, he first categorized his 275 single-item descriptors into a number of conceptually meaningful classes and then empirically extracted higher-order constructs from within each class using factor analyses. His procedure differed from the present one in several ways. Factor analysis was the technique used to determine convergent and discriminant validity, and neither construct nor predictive validity criteria were taken into consideration. Further, Astin's conceptual schema was quite different from the present one.

> to correlate in similar ways to a prespecified set of school outcomes.*

If the general construct commonly measured by a set of variables is meaningful in the functioning of the school, then the variables in the set should exhibit similar patterns of relationships to school outcomes (e.g., percent to college, dropout rates, student satisfaction, etc.) That is, their correlations with any one school outcome should be similar to the others in terms of sign and relative magnitude. To the extent they do not have similar correlations, we can conclude either

a. that they are not measures of the same construct,

b. that they measure the same construct,** but the construct is weakly related to system outcomes or not related at all,

c. or, that they measure the same construct (and that construct does have a moderate or high relationship to system outcomes); but the construct contributes such a small percentage of the total variance in the measures that its relationship to the outcome is masked by item specific factors in the measures.

If situation (a) exists, it would not make sense to combine the measures, since they do not represent a valid construct and are, therefore, not likely to be good general purpose predictors.

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* I use the term "general" construct validity to describe this method of testing for construct validity because I am not following the usual procedure of testing for hypothesized relationships stated a priori between specific variables. Rather, I am testing the general hypothesis that the variables under consideration are components of a construct which is somehow important in the functioning of the organization as a system. As such, they should exhibit similar relationships to outcomes of the system (such as college attainment rates, dropout rates, level of student satisfaction, etc.).

** In other words, the construct contributes some portion to the total variance of each measure -- or, to use Cronbach's terms, the measures under consideration share a "general factor".(Cronbach, 1951)

If situation (b) or (c) exists, the measures under consideration do share a valid construct even though our general decision rule would lead to their not being combined into a single measure. This is unfortunate, but the practical costs for the Youth in Transition study of failing to verify such a construct appear to be quite limited, since under situation (b) the construct does not have important predictive power for system outcomes, and under situation (c) our measures of the construct are so weak that the construct as measured will have little or no predictive power to system outcomes. Therefore, the decision rule to combine only those measures which show a pattern of similar correlations to school outcomes is a useful one for practical purposes. A failure to pass this empirical test does not mean necessarily that there is not a valid construct or that our measures do not validly measure the construct. It simply means that one of the three situations described above (a), (b), or (c) pertains.

So far, we have been discussing features which were common to all stages of data reduction. We will next focus on some of the procedures which were unique to each stage. The first two major phases differed in several ways. The first phase dealt with the full set of 1,600 predictors, eventually yielding a reduced set of 284. A subset of ten boys' outcome dimensions, selected from the full set of 53, were used as the primary validating criteria. The second phase, by comparison, dealt with only 284 variables, those remaining at the end of the first phase. Because of the much smaller number of predictors in phase two, the full set of 53 boys' outcomes could be used as validating criteria.

Phase I of the Data Reduction

Since only a sampling of boys' outcomes were used during the first phase, some thought was given to the selection process. The sample was intended to be somewhat representative of the larger set; therefore, variables were selected from each of a number of types of outcome categories (plans, behaviors, attitudes, etc.). Further, to insure the inclusion of criteria which were among the most sensitive to school effects, a number of boys' outcomes were examined for statistical relationships to a sampling of school characteristics. Those which were most predictable from this small, intuitively selected sample of school predictors were chosen for inclusion. The final list is presented in Table 5. (Note that variables measured across time had their raw change scores included as criteria as well as their T3 scores. The latter correspond to the end of twelfth grade.)

TABLE 5

School Outcomes Used as Validating Criteria in Phase I of the Data Reduction

STUDENT OUTCOMES

1. College Plans (T3, T1-T3 change)
2. Scholastic Aptitude Test: Combined Verbal and Math (T3)
3. Job Information Test (T3, T1-T3 change)
4. Value of Academic Achievement Index (T3, T1-T3 change)
5. Positive Attitudes Toward School Index (T3, T1-T3 change)
6. Rated Helpfulness of Counseling (T3)
7. Total Delinquency Score (T3, T1-T3 change)
8. Racial Attitude: Felt Social Distance (T3)
9. Anti-Vietnam War Index (T3)

INTERMEDIATE OUTCOMES

1. Percent of Boys to College (from Principal)
2. School Retention Rate (from Principal)
3. Daily Absentee Rate (from Principal)
4. School Reputation (rated by Teachers and Boys)
5. Quality of Principals' Role Performance (rated by Teachers)
6. Quality of Teachers' Role Performance (rated by Teachers)
7. Quality of Students' Role Performance (rated by Teachers)
8. Rating of Counseling Program (by Counselors)
9. Innovation (from Teachers and Principal)
10. Teacher Job Satisfaction (from Teachers)
11. Rated Adequacy of Opportunity to Self-Actualize (from Teachers)
12. Counselor Job Satisfaction (from Counselors)
13. Degree of Teacher Trust in Student Honesty (from Boys)
14. Perceived Teacher Attraction to Students (from Boys)
15. Perceived Teacher Interest in Students as Individuals (from Boys)
16. Norm Against Student Deviance in School (from Boys)

An additional set of validating criteria drawn from the section in the conceptual framework labelled "intermediate outcomes" was also used in phase one. They were included because of their intrinsic importance and/or their assumed relationship to other more important school outcomes. They are also presented in Table 5.

Naturally, with the number of independent variables being empirically screened for predictive power, we were concerned about the problem of accumulating predictors which happen to do well in this particular sample of schools "by chance", but which would not have comparable explanatory power in the larger population of high schools. To some extent, of course, we reduce the chances of making such errors by using only a few of the total set of boys' outcomes in the screening process. Nevertheless, there still seemed to be a substantial danger of "optimizing on error." Therefore, it was decided that only one-half of the sample of schools would be used to examine the relationship between all of the independent variables and the list of validating criteria mentioned above, so that the extent of error optimization could eventually be determined by using the resulting predictor set to predict to outcomes in the other half of the split-half sample of schools.* (As we will see later, the need for that assessment never arose.) Tests for convergent validity and discriminant validity were still based on the full sample of schools (82) on the grounds that such correlations would be most reliable using the larger sample, and comparable problems of error optimization are not involved since dependent variables are not used in these operations.

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* A carefully stratified random sampling procedure was used to select half of the sample of schools. Only 82 of the 87 schools were used as the total aggregate level school sample for this volume because five black, Southern segregated schools were eliminated for methodological reasons. Therefore, the split-half sample was comprised of 41 schools.

These five schools were dropped from the analyses for the following reason. It was known that their student bodies were mostly black, exceptionally low in socioeconomic status, and low in measured intelligence. Anything unique about these schools as social systems would be confounded with these exceptional characteristics of their student bodies. Therefore, we decided to eliminate them from the analyses involving the dimensionalization of schools as social systems on the grounds that these highly exceptional schools could potentially dominate many of the empirical relationships, and we would not want to make decisions on relationships which would not hold up if these schools were removed from the sample statistics.

As mentioned above, for variables to be clustered they had to show a pattern of relatively similar correlations to a whole host of validating criteria. Potential clusters were first identified by an examination of the intercorrelations among the predictors in a conceptual group, using Pearson product-moment correlations. A special computer program entitled HICLUSTER was used to identify variables which tended to group together. Working with the original table of correlations, which it treats as proximity coefficients, it builds clusters based on the proximity of the variables. The proximity of a variable to a cluster is measured by the lowest correlation between that variable and any variable already in the cluster. The lower that lowest correlation is, the lower is the proximity. A cluster can be comprised of any number of variables, including a single variable which has not yet been joined with any others. So, if twenty variables are in an analysis, the program starts by treating all twenty as clusters and then through a series of twenty sequential steps joins clusters two at a time, each time combining the two clusters which have the greatest proximity. The first step simply combines those two variables having the highest pairwise correlation. There are then nineteen clusters, one of which is comprised of two variables.

Such a procedure is, in a sense, empirically building clusters which optimize the convergent and discriminant validity. The analyst can decide at what point the clustering ceases to meet his requirements for convergent and discriminant validity, and summary statistics are provided to assess these. No rigid cutoffs were used in this data reduction effort, so none can be specified here. However, the general HICLUSTER procedure for identifying candidates for consolidation was used routinely. A factor analytic procedure could have been used in a comparable way, and some preliminary comparisons of the two methods suggest that quite comparable groupings of variables would probably have emerged. We felt, however, that the clustering procedure -- in addition to being much less expensive than factor analysis -- provided more flexibility to the analyst.

The variables which tended to cluster most strongly in the HICLUSTER analyses were then screened for similar behavior in relation to the validating criteria. (Relationships were seen as dissimilar when one predictor-criterion correlation differed from the signed correlation between another predictor and the same criterion by more than ± .20.) When a grouping of variables produced by the HICLUSTER program did show a pattern of relatively similar correlations with the validating criteria, they were combined into an index, each receiving approximately equal weight.* If all but one or two variables in a group showed a similar pattern of correlations, the exceptions were deleted and the remainder clustered.

The great majority of clusters created in the data reduction process were built during the first phase. However, exactly the same strategy was used in the second phase where four more clusters were built.

Elimination of Poor Predictors. Although clustering was a central part of the variable reduction effort, most of the shrinkage in numbers was due to variables simply being dropped from further analytical consideration. In the first phase a failure to correlate with more than two or three of the validating criteria at a level ≥(± .30) was the basis for deletions.** There was no rigid decision rule, and a number of variables which did not predict very well were kept on into the second phase for substantive reasons. However, the strongest predictors in the total set are certainly among the 300 carried on to the second phase of data reduction.

Curvilinear Relationships. So far, all methods of analysis described have used linear correlations. The sheer number of predictor variables precluded the possibility of checking for curvilinear effects "across the board." Instead, a number were selected for non-linear investigation when in the opinion of the author they appeared to be likely candidates for curvilinear effects. (School size and degree of urbanicity are examples.) Obviously, the nonlinear effects of some variables will go undiscovered with this method, a regrettable but unavoidable fact from a practical standpoint.

In all, 32 variables were investigated for possible curvilinearity. (They are listed in Table 6). The procedure was to compare the linear correlation between an independent and dependent variable to the eta value derived from a one-way analysis of variance using the same two variables.***

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* If the ratio of the standard deviations of any two variables exceeded 1.5, all variables were standardized prior to the building of the index. Otherwise, an equally weighted mean was taken across all variables in their raw-score form.

** For a sample size of 41, the cutoff for the .05 level of error is ± .31 assuming a priori statement of hypotheses.

*** Eta is analagous to r in that it measures a degree of association, but different in that it reflects non-linear as well as linear association.

TABLE 6

Variables Selected for Non-Linear Analyses

	Source*
Student Inputs	
Region	--
Urbanicity	Pr. 1A5
Socioeconomic Level	Boys at T1
Percent of Student Sample Black	Interviewer at T1
Gates Reading Test	Boys at T1
Rate of Change in Enrollment Size	Pr. 1B3
Rate of Student Turnover	Pr. 1B4,5
Positive Family Relations Index	Boys T1 Q'aire
Percent H.S. Students Male	Pr. 2D 2a
Percent Students Live Within 1 Mile of School	Pr. 2D3
Any Preselection of Students?	Pr. 1A3a
Basis for Preselection	Pr. 1A3b
Staff Inputs	
Principal: Years as Principal of this School	Pr. 2C5
Principal: Years Experience in All Educational Roles	Pr. 2C6,7
Percent of Teachers Male	Pr. 2I 1a
Teachers: Average Years of Experience	Tchr. K4
Organizational Structure	
Number of Grades in the School	Pr. 1A1
Number of Students in Grades 10-12	Pr. 1B2k
Number of Specialized High Schools in System	Hd. Cnslg. 24
Number of High Schools in System	Pr. 1A4
Percent of Classes Ability Grouped, Intentionally or Unintentionally	Tchr. K20÷K18
Organizational Processes	
Administrative Emphasis on Academic Performance	Tchr. G13A
Percent of Courses Failed	Tchr. K 14

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* Abbreviations: T1=Time 1;T2=Time 2, etc.; Pr.1=first Principal Questionnaire; Pr.2=second Principal Questionnaire; Cnslr.=Counselor Questionnaire; Hd.Cnslg=Head of Counseling or Counseling Program Questionnaire; B1a=Section B, item #1, subpart a; etc.

School-Environment Transactions

Locus of Decision-Making (School vs.System)	Pr. Bl a-r
Influence of Local Colleges on School	Tchr. A26a
Influence of Political Groups on School	Tchr. A26c
Influence of PTA or PTO on School	Tchr. A26b
Influence of Tchr. Assoc. on School	Tchr. A26d

Intermediate School Outcomes

Level of Conflict Among School Staff	Tchr. A25 b-d
Opportunity for Students to Use Intelligence	Boys T2 I'view G8d
Opportunity for Students to be with Friends	Boys T2 I'view G2b
Rate of Retention of Male Students in Grades 10-12	Pr. 1B6

When eta corresponds quite closely to the absolute value of r (eta is an unsigned statistic), it means that the linear correlation between two variables accounts for just about all of the between-class differences on the dependent variable. In a one-way analysis of variance scores are grouped into classes according to their value on the independent variable. The more eta exceeds r, the greater is the degree of nonlinear association.

For the 32 school characteristics chosen for analysis, eta and r statistics were calculated corresponding to the relationship of each to every one of the 50 boys' outcomes. Those giving evidence of appreciable nonlinear relationships with three or more of the boys' outcomes were considered further to see whether some consistent nonlinear pattern -- perhaps a curvilinear one -- could be observed across various boys' outcomes. This examination was made for 13 of the original 32 independent variables and resulted in the conclusion that only two of them -- urbanicity and region -- justified special treatment to capture nonlinear effects in the analyses.

The rest yielded sufficiently unique patterns of relationships to the various boys' outcomes to suggest that the nonlinear components may well be due to sampling and measurement error. For the two variables showing consistent nonlinear patterns of association, special dichotomous "dummy variables" were created to permit their use in linear analyses. The major urbanicity "effects" were captured by the original variable plus a dummy variable which assigned suburbs and small cities to one code value and communities of all other sizes (rural, small town, large city) to a second code value. Most criterion differences associated with the original four category region code were captured by two variables -- a four code variable which simply reordered the regions, and a dichotomous variable which separated the South from all other regions.

Effects Due to Interaction. Under the screening procedure described earlier, only variables which had moderate main effects were retained for later multivariate analyses. Therefore, if a variable's effects were only interactive (not main) or if its effects were masked by a supressor variable, the predictive value of the variable went undiscovered in this analysis strategy; and such a variable was dropped from further consideration. Again, there appeared to be no practical alternatives to the strategy, given the vast quantity of information to be handled.

Results of Phase I. After several months of analysis on the 1,600 or so raw variables with which we started, and using the clustering and elimination criteria outlined above, we came out with 284 variables.

Some were newly created indexes while many were original variables which failed to cluster with others. Most had passed the test of having predictive power to at least some of the selected criteria, although a few were retained despite their inability to predict simply because of their presumed theoretical importance.

Phase II of the Data Reduction

The 284 variables emerging from the first phase of data reduction became the entire set to which attention was addressed in the second phase. The basic objectives remained the same -- namely, to eliminate and consolidate predictors according to the empirical criteria set forth earlier -- but the strategy for accomplishing these objectives changed somewhat. In this phase all 53 boys' outcomes, rather than a sampling of ten, were used to test the predictive power of variables and to test the construct validity of potential combinations of variables. The sixteen intermediate school outcomes, also used as validating criteria in Phase I, were dropped. In addition, all schools in the analysis sample (82) were used rather than a random split-half of the sample.

Both of these changes tended to bring back the problem of optimizing on error in the process of winnowing predictor variables, so a different method of dealing with that problem was adopted. Instead of automatically retaining variables having some number of correlations with criterion variables in excess of ± .30, as we did in Phase I, we required that the average correlation between the predictor and the 50 criteria be somewhat above what would be expected by chance assuming no valid predictor-criterion relationships existed in the larger population of high schools. A special computer program called MATSUM was written to derive a bracketed frequency distribution of the correlations of any given predictor with the 53 criteria in the table and to calculate the average correlation. The expected value for the average correlation from a random or chance set of independent relationships would be zero, with some observed correlations being higher and some lower. In fact, the sampling distribution of observed correlations based on an N of 82 would show a bell shaped curve with the mode and mean at zero and extremely few observations greater than ± .30 (less than 1%). However, because we were interested in the magnitude of the correlations independent of their sign, we wanted to transform the original sampling distribution based on signed correlations to one based on absolute value (unsigned) correlations.* Assuming that the null hypothesis is true -- that in the larger population the true correlation between two variables is zero -- the sampling distribution for the absolute correlations observed in repeated samples of 82 schools would have an expected value of .10, not zero.**

Having established this expected absolute value due to chance alone for any one given correlation, we had a benchmark against which to compare observed values. However, for each of the 284 predictors we had not one correlation but 53, one against each of the 53 criteria. If all of those correlations were due to chance, as opposed to valid relationships in the general population, then each would have an expected absolute value of .10, and an average across all 53 of them would also have an expected value of .10. It is that average across the 53 correlations on which we will concentrate. The average would itself have a sampling distribution, and although we did not actually generate its sampling statistics, it seems safe to suppose that with 53 observations there is a fairly tight sampling distribution around the mean of .10.

An average absolute correlation to the set of 53 criteria was calculated for each of the 284 predictor variables analyzed in Phase II, for a total of 15,052 correlations. The 101 predictor variables showing average correlations equal to or less than .11 were dropped from further consideration on the ground that they predicted to the 53 criteria little or no better than at the expected chance level. Thus, even though such variables may have appeared to relate well to one or two particular criteria, their average data suggested that those few strong relationships may very well be due to chance. Had we hypothesized a priori that we would discover a strong relationship between two variables and then did find it, we would be inclined to believe it regardless of the average performance of the predictor variable against all criteria. But, given the post hoc nature of our search, we must accept the fact that we might well miss some predictors which validly relate to one or two specific criteria, in order to avoid reaching a great number of false positive conclusions.

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* Unsigned correlations were used because the size of the average deviation from zero was the important factor, not the direction. Depending on the particular criteria used in the study, a good predictor could have very high correlations with all criteria and still yield an average signed correlation of zero, if the positive and negative correlations just happened to balance each other out.

** Actually, the .10 was a slight underestimate of the expected correlation due to chance, because the 53 observed correlations between any one predictor and the set of 53 criteria were sorted into bracketed categories before a mean was calculated, and each was assigned the value of the midpoint of the bracket. This technique tends to yield a mean value which is slightly higher than the true mean. Therefore, the mean due to chance (.10) should be adjusted up slightly to be exactly comparable, but the resulting adjustment would be very minor.

Of the 284 predictors, 101 were thus eliminated on strictly empirical grounds. Roughly, an equal number were subsequently eliminated using a combination of empirical and judgmental criteria, both of which are listed below.

a) Average correlation to the 53 criteria. Most predictors having high average correlations (.15 and above), were kept. Exceptions were based primarily on the following factors.

b) Correlations not explainable in terms of socioeconomic level. If a predictor's average correlation to the criteria appeared to be explainable almost entirely through its relationship to socioeconomic level -- that is, it related strongly to SEL and primarily to criteria which were highly correlated with SEL -- then it was dropped at this stage on the grounds that it would be eliminated in the next stage anyhow.

c) Correlations not explainable in terms of shared respondent bias or conceptual overlap. When boys' data were the source of a predictor, a more rigorous examination of the correlations took place. This was done because correlations with at least some of the criteria (attitudes toward school, for example) were apt to be inflated by "halo effects" since the same respondents were supplying both the predictor and criterion information. The closer the predictor and criterion were conceptually, the more likely we were to assume that halo effects accounted for high correlations. If a high average correlation was due primarily to a predictor's relationship to conceptually similar criteria reported by the same respondents, it was apt to be eliminated.

Results of Phase II. Of the 284 variables examined in relationship to the 53 boys' outcomes, 80 were retained intact. In addition four new indexes were created using the empirical criteria for index validation described earlier. Each of these indexes was comprised of two items which predicted well to the criteria and showed evidence of sharing a valid construct. An additional three predictors, created as a result of the special analyses described earlier to capture nonlinear effects, brought the total number of independent variables to be retained for multivariate analyses to 87.

Phase III of the Data Reduction

The first two phases of data reduction shared as their common objective the retention and creation of variables which appeared to have strong relationships to boys' outcomes in the study. Correlations, measuring zero-order linear association, were used to assess the strength of those relationships. However, as we noted at the beginning of this working paper, differences in the types of students served by various schools must be taken into account before we can be at all certain that the schools or some characteristics of the schools really account for student differences which are observable by the end of high school. In other words, we must begin to control for "other things", the latter primarily being characteristics of the students as they entered the high schools. As we already know from the work of other investigators (Coleman et al,1966 and Flanagan et al, 1962) many characteristics of high schools covary with characteristics of the students they serve, the socioeconomic level of the students in particular; and the latter are therefore likely to account for many of the apparent effects of those school characteristics.

The basic procedure in Phase III, then, was to control for student inputs by partialling out the effects of certain initial student characteristics from the correlational relationships between the remaining predictors and the 53 boys' outcomes.*

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* It is the case that several statistical procedures might have been used to search for the existence of "unique" effects from school characteristics. Other than the partial correlation method used here, there are two other types of statistics to which we might have given serious consideration for our purposes here: the proportion of marginal variance accounted for by the school characteristics using multiple regression, and the part correlations between the school characteristics and boys' outcomes, with student body characteristics partialled out of the boys' outcomes. These three methods for analyzing school effects have been compared by Werts and Linn (1966), and they conclude that, of the three, the method we have chosen yields the greatest likelihood of demonstrating unique effects of school variables. They mean by this contention, although it is not explicitly stated, that the partial correlation method is most likely to yield a high number relative to the numbers from the other methods discussed -- a contention with which I am in agreement. Therefore, the type of correlational statistic chosen here -- the partial correlation -- yields the greatest likelihood of finding apparent effects of school characteristics.

The domain of retained predictor variables had been narrowed to 87 in the second phase of data reduction. Those 87 were rerun in a single correlation table against the 53 criteria, and then two partialling procedures took place. The 87 variables along with their average correlations and partial correlations are presented in Table 7 .

Partialling out SEL. First, the average socioeconomic level of the student body (represented by two separate measures) was partialled out of the correlation table, yielding a matrix of second order correlation coefficients.* Each of these partial correlation coefficients indicated the linear relationship between the two variables with socioeconomic level removed. The MATSUM computer program which was used in the second phase to calculate average absolute correlations for each predictor across all 53 criteria, was used in a comparable manner in this phase to calculate the average absolute partial correlation for each predictor. By examining the resulting statistics, we were able to get some idea whether a predictor still appeared to be related to boys' outcomes at a better-than-chance level after controlling for SEL. We were also able to determine how large a drop in the average correlation resulted when we controlled for socioeconomic level.

For example, an index rating the quantity and quality of the textbooks in the school dropped from an average absolute correlation with all boys' outcomes of .17 to an average partial correlation of only .11 after SEL was removed. Given that the expected value of the average chance correlation (or average chance partial correlation) is about .10, we can conclude that practically all of the valid relationship between the textbook index and the 53 boys' outcomes could be accounted for by associated differences in the socioeconomic level of the student body. A similar reduction occurred with an index of school innovativeness, where the average absolute correlation dropped from .16 to .10 after partialling, and for an index of the number of extracurriculars offered with a drop from .19 to .11.

Partialling Out Other Student Characteristics. Having assessed the effect on all 87 predictors of partialling out the socioeconomic level of the student body, we then proceeded to partial out a larger set of background, ability, and demographic characteristics. This computer run yielded tenth order partial correlations after partialling on the following variables:

a) Socioeconomic Level (Two Time 1 measures: the average SEL of the retained sample and the average SEL of the original sample in the school.

b) Test Scores (Three Time 1 measures: the Ammons and Ammons Quick Test of Intelligence, the Gates Test of reading ability, and the GATB-J - the General Aptitude Test Battery, Part J on verbal ability)

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* SEL is based on an equally weighted index of father's education, mother's education, Duncan status of father's occupation, number of rooms per person in the house, number of books in the house, and an index of posessions in the house.

c) Region (Three measures: original, linear recode, and South vs. all others.* See Table 7.)

d) Urbanicity (Two measures: the original ordinal variable and the dichotomous variable -- suburbs and small cities vs. all others. See Table 7.)

In general, the average partial correlations for the 87 predictors resulting from this run tended to be lower than those we observed when only socioeconomic level was partialled out.

Results of Phase III Of the 78 predictors addressed in Phase III which were not themselves partialled out, 57 had average partial correlations equal to or less than .12 when the ten "student input" variables were partialled out. When SEL alone was partialled out, only 32 had shown average partial correlations that low, and only 8 had shown average correlations in that range before any partialling took place.

These results suggest, then, that for the majority of the predictors which survived the screening processes in Phases I and II, their high degree of correlation with boys' outcomes can be explained almost entirely by associated differences in the types of students served. This does not imply necessarily that such school characteristics make no difference in terms of affecting student outcomes, only that on the average we are not able to attribute "unique effects" to such variables above and beyond the effects that they share with student input characteristics.

On the brighter side, 21 variables did survive this rather rigorous screening procedure and gave some indication of having average marginal predictive power well above the chance level. The highest average partial correlation for any one predictor across all 53 criteria was .20. Of the 21 variables with average absolute tenth order partial correlations greater than or equal to .13, nineteen were kept for subsequent analyses of school effects at the individual (student) level of analysis.**

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* In retrospect we realize that a better method of partialling out the differences associated with the four regions in these linear analyses would have been to create three dichotomous "dummy variables". However, from a practical standpoint, we think it likely that most of the variance associated with region is captured by the three variables we did use.

** Two were dropped because of their high partial correlations with two other variables in the set of twenty-one.

TABLE 7

Average Correlations and Partial Correlations Between Each of 87 School Characteristics and the Full Set of Student Outcomes

(N=78)

Variable	Instrument/Section/Items++	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
INPUTS TO THE SCHOOL				
Student Inputs				
Region (West, N.Central, N.E., South)	--	15	15	-- ✓
Region (N.E., West, N.Central, South)	--	17	18	-- ✓
Region (South, all others)	--	16	16	-- ✓
Urbanicity (Rural, Sm.Town, Sm.City Suburb, City over 50,000)	Pr. 1A5	16	14	-- ✓
Urbanicity (Sm.City & Suburb, all others)	Pr. 1A5	16	11	-- ✓

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* "Average Correlation #1" is the variable's average, absolute product-moment correlation with 53 student outcomes.

** "Average Partial Correlation #2" is the variable's average, absolute second-order partial correlation with 53 student outcomes after two measures of socioeconomic level (SEL) have been partialled out.

+ "Average Partial Correlation #3" is the variable's average, absolute tenth-order partial correlation with 53 student outcomes. Partialled out are ten variables measuring SEL, Time 1 student ability, region, and urbanicity. (See text for details)

++ Abbreviations: T1=Time 1; T2=Time 2,etc.; Pr.1=first Principal Questionnaire; Pr.2=second Principal Questionnaire; Tchr.=Teacher Questionnaire; Cnslr.=Counselor Questionnaire; Hd. Cnslg=Head of Counseling or Counseling Program Questionnaire; B1a= Section B, item #1, subpart a; etc.

A check (✓) indicates that a variable was retained for multivariate prediction at the individual level of analysis.

Table 7 (con'td)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Socioeconomic Level	Boys at T1	28	--	--	✓
Quick Test of Intelligence	Boys T1 Test	26	18	--	✓
General Aptitude Test Battery -- Verbal (J)	Boys T1 Test	27	20	--	✓
Gates Reading Test	Boys T1 Test	27	22	--	✓
Percent H.S. Students Male	Pr. 2D2a	14	15	11	
Percent of Student Sample Black	Interviewer T1	15	15	12	
Mental Health Services Available in Community	Hd. Cnslg. 6A-F	14	9	10	
Staff Inputs					
Teacher Education Level	Tch. K6	16	14	12	
Percent Teachers Black	Pr. 1D5	12	13	12	✓
Percent Teachers Male	Pr. 2I 1A	14	14	13	✓
# Counselors per H.S. Student	Hd.Cnslg. Pr.	15	12	12	
Adequacy of Clerical Assistance in Cnslg.	Hd. Cnslg. 10E	17	12	11	
School Mental Health Resources	Hd. Cnslg. 6	14	14	10	

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Monetary Inputs					
Teacher/Principal Salary Index	Pr. 2C14, I 4	20	17	13	✓
School Facilities					
Adequacy of School Building	Boys T2 Interview, B21, Tchr. A9, Hd.Cnslg.10A,B	13	10	11	
Quantity & Quality of Texts	Tchr. A 7,8	17	11	12	
	* * *				
ORGANIZATIONAL STRUCTURE					
Size of School and School System					
Number of Students in Grades 10-12	Pr. 1B2K	16	14	10	✓
Number of High Schools in System	Pr. 1A4	13	14	11	

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Number of Levels in the Hierarchy				
Number of Levels (Princ,Asst.Pr., Dept. Hd.)	Tchr. Inside Cover A,C	17	14	11
Division of Labor				
Hrs./Week Teachers Advise Extracurriculars	Tchr. K 15G	11	10	10
Division of Students				
Percent of Classes Intentionally Ability Grouped	Tchr. K 20÷K 18	15	14	10
Tracking into Programs of Study				
Proportion of College Prep Students who enter Prgrm. During Grades 11-12	Hd. Cnslg. 27	12	11	10
Percent H.S. Males in College Prep.	Pr. 1C3a	16	12	11
Percent H.S. Males in Vocational	Pr. 1C3c	13	12	12
Percent College Prep Students Going to College	Hd.Cnslg. 29A	14	11	11

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Activities and Programs				
Total Number of Extracurriculars Offered	Pr. 1C12	19	11	9
Number of Classes for Exceptional Children	Pr. 1C7	14	11	9
Number Procedures to Prepare Students for Career & Educational Decision	Hd. Cnslg. 13,15-17	12	13	11
Number Procedures to Acquaint Students with Job Opportunities	Hd. Cnslg. 17	13	14	10

* * *

ORGANIZATIONAL PROCESSES

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Influence and Control				
Influence of the Principal	Tchr. B1Ba	13	10	10
Influence of Dept. Heads	Tchr. B1DA	14	11	10
Combined Influence of Princ. and Dept. Hds.	Tchr. B1BA, 1DA	15	12	11
Teacher Influence over Course Content	Tchr. B2BA	18	16	10

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Combined Influence on Tchr. Salaries of Supt'd, Board, & Teachers	Pr. 1G 7 A,B,E	15	10	12	
Influence of Tchrs. on Tchr. Salaries	Pr. 1 G 7E	17	12	13	✓
Bases of Teacher Power over Students					
Amount of Coercive Power	Boys T2 Q'aire F 12D	19	12	13	
Amount of Referent, Expert & Legitimate Power Combined	Boys T2 Q'aire F10A,C,E	16	17	19	✓
Coercive Power of Favorite Tchr.	Boys T2 Q'aire, F12D	19	13	12	
Teacher Evaluation					
Percent of Teachers Formally Evaluated	Tchr. D6	14	11	10	
Organizational Objectives of Administrators					
Academic Achievement Emphasis	Tchr. G12A,13A	22	15	12	
Order & Quiet Emphasis	Tchr. G5A	11	11	11	

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Self-Renewing Practices					
In-Service Counselor Training	Hd. Cnslg. 31 A-C,D	15	14	10	
Frequency of Communication and Interaction					
Percent of Students with whom Tchr. Discusses Occupational Plans	Tchr. K 22B	19	13	12	
Frequency of Tchrs. Initiating Discussions with Students	Boys T2 Q'aire F40	15	15	13	✓
Role Sending and Norms					
Tchr. Status Based on Good Teaching	Tchr. A18	14	12	10	
Amount of Admin. Pressure for Teacher Performance	Tchr. A 24A	15	9	9	
Tchr. Status/Pressure to Perform	Tchr. A 18, 24A	16	11	10	
Tchrs. Adapt to Student Interests	Boys T2 Q'aire F22G	11	10	12	
Intellectual Encouragement of Students by Teachers	Boys' T2 Q'aire F22B,34	17	18	20	✓

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Grading and Promotion					
Index of Failure & Non Promotion of Students	Tchr. K14,Pr.2D5	13	12	11	
* * *					
SCHOOL-ENVIRONMENT TRANSACTIONS					
Decentralization of School System					
Locus of Decision-Making (School vs. System)	Pr. B 1a-r	11	11	14	✓
Influence of Outside Groups					
Parental Concern with School Functioning	Tchr. A 29,31,33	21	13	12	✓
Community Support for the Schools	Tchr. A30,32,34	15	12	11	
Influence of Local Colleges on School	Tchr. A 26A	13	12	11	
Influence of Tchr. Association on School	Tchr. A26D	16	12	11	

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Contacts with Receiving Institutions					
Links to Colleges	Cnslr. A15 ,Hd.of Cnslg. 20,21	20	14	11	
	* * *				
INTERMEDIATE SCHOOL OUTCOMES					
Student-Teacher Relations					
Teacher Liking and Respect for Students	Boys T2 Q'aire F25,31,48	14	16	15	✓
Tchr. Irritability with Students	Boys T2 Q'aire F22E,27,29	20	17	16	✓
Tchr. Trust in Student Honesty	Boys T2 Q'aire F 30	14	16	18	✓
Positive Student-Tchr. Relationships	Tchr. A23, 25A	12	13	10	
Student Peer Norms					
Norm Against Deviance in School	Boys T2 Q'aire F 16-20	16	15	12	
Norm to "Bug" the Tchrs.	Boys T2 Q'aire F 52	19	19	20	✓

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Competition for Grades	Boys T2 Q'aire F 14	16	13	12
Norm to Cooperate & Achieve in School	Boys T2 Q'aire F14,52	20	18	18 ✓
Bases of Peer Status				
Being College-Bound Important	Boys T3 Q'aire, H 10	13	10	11
Participation in Student Activities Important	Boys T2 Q'aire,F21B	14	15	13 ✓
Family Status Important	Boys T2 Q'aire,F21A	18	14	11
Academic Achievement Important	Boys T2 Q'aire, F 21D,F	13	12	11
Innovation				
Rated School Innovativeness	Tchr. E1	16	10	11
School Reputation				
Reputation of the School	Tchr. A6,Boys Q'aire T2 F 13	19	14	14 ✓

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Opportunity Structure of the School					
Student Opportunity to Self-Actualize	Tchr. H2,5-8	15	13	13	
Student Opportunity/Requirement to use Intelligence	Tchr. H7,8 Boys T2 Interview, G8C,D	17	16	15	✓
Rated Performance of Role Occupants					
Teacher Performance Rating	Tchr. A36B	16	12	11	
Student Performance Rating	Tchr. A36D	23	16	11	
Teacher Enjoyment of Teaching	Boys T2 Q'aire F 46	14	15	14	✓
Staff Outcomes					
Teacher Self-Esteem	Tchr. I 1,3,5,7,9, 11,13,15,17,18	14	13	10	
Importance of Tchr. Congeniality to Tchr. Satisfaction	Tchr. J 6A,B	20	16	17	✓

Table 7 (cont'd)

Variable	Instrument/Section/Items	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3	
Dropping Out and Absenteeism					
Rate of Retention of Male Students in Grades 10-12	Pr. 1B6	14	11	10	
Percent Students Absent per Day	Pr. 1B9	14	15	17	✓
Dropout/Absentee Cluster	Pr. 1B6,9	16	16	17	✓
Discipline					
Average Time Spent with Cnslrs. for Getting into Trouble	Boys T3 Q'aire, H 43	18	14	11	
College Attainment					
Percent of Graduating Boys to 2 or 4 Year College	Pr. 1C11	18	11	11	

Three other school characteristics were carried along as well, even though they failed to meet this empirical criterion: school size, parental concern with school functioning, and the proportion of black teachers in the school.

In addition to these 22 school characteristics, ten "student input" characteristics were retained for individual level analyses: nine of the ten which had been partialled out (described above) plus a variable measuring the proportion of our student sample from each school who were black. These student input characteristics can be treated as characteristics of the school once we move to individual level analyses, since they measure characteristics of the student body as a whole. Many, such as socioeconomic level, do have a corresponding measure for each individual student; but it still makes sense to ask whether the average socioeconomic level of the student body has any effect on a student once you take into account his own family's socioeconomic level.

Altogether, then, there were 32 school level variables retained for subsequent use in analyses at the individual level. Among the thirty-two were the twenty or so variables which should have the greatest chance of "showing school effects" which are "unique", i.e. cannot be explained by the background characteristics of individual students.

Summary of the Data Reduction Process

We set out in this stage of the study to narrow the large number of descriptive characteristics of the school (Some 1,600 variables) down to a very limited set of conceptually meaningful and predictively powerful variables. Variable elimination and variable consolidation were the two basic procedures by which this data reduction process was accomplished. All analyses for these procedures were conducted using school-level data.

Variable consolidation. The process of combining variables into indexes which measure higher order constructs was accomplished by the application of several empirical procedures to the data. More specifically, clusters of variables were identified which exhibited reasonable levels of convergent and discriminant validity. Before being combined into an index, they were further tested for a general form of construct validity -- a test which required all of the possible ingredients for an index to show fairly similar relationships to a prespecified set of student outcomes. The variables meeting these several empirical criteria were consolidated into a single index.

To ensure that the indexes resulting from such a procedure were conceptually meaningful and useful from a practical standpoint, variable consolidation took place only within prespecified categories in a conceptual framework, not across categories. The major conceptual categories into which the set of 1,600 variables were divided are given in Table 2.

A considerable number of constructs did emerge as a result of these empirical procedures. Those which survived the first two stages of data reduction can be identified in Table 7 by the fact that the variable is based upon two or more items. Many others which were built in Phase I do not appear there because they were eliminated in Phase II.

Variable elimination. The process of deleting variables from the set used in subsequent analyses was also accomplished by the application of conceptually-guided empirical procedures. The particular procedures used were different for each of three major phases of data reduction, but all were based on the principle that a variable must exhibit better than chance levels of association with prespecified boys' outcomes in order to be retained for later multivariate analyses.

At first, a sampling of nine of the student outcomes in the Youth in Transition study were used to determine the predictive power of the variables (fourteen counting both static and change scores).

They were supplemented by sixteen "intermediate outcome" measures, such as "school reputation" and "school innovativeness", which were also used as validating criteria. Then, in the second phase of data reduction, during which the number of school variables was narrowed from 284 to 87, we used all fifty student outcome measures as validating criteria and none of the intermediate outcomes.

While the first two phases of data reduction required only that variables correlate better than chance with sets of student outcomes, the third phase introduced a more stringent test. In order to be retained in the third phase variables were required to show a better than chance level of association with student outcomes after controlling for certain student input characteristics. In other words, school variables were eliminated at this stage if their high levels of association with the student outcomes could be explained by the fact that they covary with the type of students the school received.

At the end of the third phase, some thirty-two variables measuring school characteristics at the aggregate level were chosen as the predictor set to be used in analyses at the individual (student) level to determine the size of any "school effects". Ten of the thirty-two were student input characteristics and the remaining twenty-two were other characteristics of the school.

SELECTING THE MOST PREDICTABLE STUDENT OUTCOMES

The goal of the work described in the last section was to reduce the set of predictors or independent variables to a manageable size, primarily by examining their average relationships to a large set of student outcomes. A parallel effort, aimed at reducing the number of student outcomes or dependent variables, was also undertaken. Our basic objective was to determine which of the many student outcomes included in the study would be the most likely to show school effects. Three different, but complementary, types of analyses were conducted to accomplish this objective: one focusing on correlations and partial correlations at a single point in time, the second dealing with changes in correlations over time, and the third involving an assessment of the amount of variance in each student outcome which was uniquely attributable to school characteristics.

Average Time 3 Correlations and Partial Correlations

The first method simply involved an extension of the analysis procedure used to screen predictors. Table 8 lists the 53 student outcomes which we used earlier to assess the effects of various school characteristics.* Now those 87 school characteristics are being used to screen the student outcomes.

We first calculated the average absolute correlation of each student outcome with the 87 school characteristics.** (See column #1 of Table 8.) One can readily observe that a few of these student outcomes -- like self-esteem, negative affective states, and relative job ambition -- show no evidence of greater than chance relationships, even at this early stage of analysis. (We estimate that an average correlation of .10 would occur by chance, using the bracketing we did in calculating an average.)

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* Detailed descriptions of the 53 student outcome variables are not provided here. They may be found in Bachman, et al. (1967) and Arscott (1970).

** The same table of correlations was used to derive the average correlations in Table 8 as was used previously for Table 7. For Table 7 we calculated averages across each of the 87 rows corresponding to the 87 school characteristics, whereas for Table 8 we calculated averages for each of the 53 columns corresponding to the 53 student outcomes.

Table 8

Student Outcome Dimensions: Average Correlations and Partial Correlations of Each with a Set of 87 School Characteristics

(N=78)

Student Outcome++	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Knowledge and Achievement			
Job Information Test	23	15	13
Political Knowledge	14	12	10
Military Knowledge Test	13	11	12
Average Grade (Sr. Year)	10	12	13
Scholastic Aptitude Test: 2 times verbal plus math	18	11	10
Behaviors			
Rebellious Behavior in School (T2)	14	13	12

* "Average Correlation #1" is the variable's average, absolute product-moment correlation with the 87 school characteristics listed in Table 7.

** "Average Partial Correlation #2" is the variable's average, absolute second-order partial correlation with the 87 school characteristics after two measures of socioeconomic level (SEL) have been partialled out.

+ "Average Partial Correlation #3" is the variable's average, absolute tenth-order partial correlation with the 87 school characteristics. Partialled out are ten variables measuring SEL, Time 1 student ability, region, and urbanicity. (See text for details)

++ All student outcomes used in these analyses were measured at Time 3 (end of senior year in high school) unless otherwise specified by the symbols T1 or T2. Exceptions are due to the fact that T3 measurements were not made on the variables in question.

Table 8 (cont'd)

Student Outcome++	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Delinquent Behavior in School	14	15	13
Total Delinquency	14	14	13
Working in Sr. Year	13	11	10
Plans			
Duncan Status of Aspired Occupation	25	19	15
Certainty the Career Choice is a Good One	10	11	13
Probability of Dropping Out (T2)	11	11	10
College Plans (Yes/No)	21	13	12
Attitudes and Values			
Academic Achievement Value	20	15	14
Social Values Cluster	20	16	13
Internal Control (Rotter)	12	13	11
Trust in People	14	16	11
Anti-Vietnam Attitude	19	15	11
Political Alienation	14	14	12

Table [illegible] (cont'd)

Student Outcome++	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Race Attitude Indexes			
Perceived Discrimination	17	12	11
Preferred Social Distance	20	18	14
Favor Strong Gov't Role	19	17	15
Favor Individual Right to Discriminate in Housing	15	16	11
Composite Index	21	19	15
Preferred Social Distance/ Residual Score with Region Controlled	18	18	12
Job Preferances			
"Job That Pays Off"	14	12	14
"Job That Doesn't Bug Me"	14	11	10
Relative Job Ambition	11	11	12
School Attitudes			
Positive	19	16	16
Negative	13	13	14
Interest in Courses	15	13	15
Self-Concept of School Ability (T2)	15	11	11

Table 8 (cont'd)

Student Outcome++	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Affective States			
Self Esteem	11	9	9
Stability of Self Esteem	12	12	11
Level of Independence	15	11	9
Emotional Dependence	10	11	11
Impulse to Aggression	15	14	11
Social Support	9	10	11
Happiness	13	11	11
Somatic Symptoms	15	14	12
Negative Affective States	11	12	12
Motives			
Need Social Approval (T1)	14	14	13
Test Anxiety (T2)	14	11	10
Need for Self-Development	12	10	12
Need for Self-Utilization	12	12	14

Table 8 (cont'd)

Student Outcome++	Average Correlation* #1	Average Partial Correlation** #2	Average Partial Correlation+ #3
Aptitudes and Abilities			
Quick Test of Intelligence (T1)	23	14	12
Matrices Test (T1)	21	13	11
Gen. Aptitude Test Battery			
J (Verbal) (T1)	23	14	11
I (Math) (T1)	15	14	10
Gates Reading Test (T1)	25	17	11
Composite GATB-J, Gates (T1)	26	16	11
Quick Test Residual of Gates (T1)	15	11	11
School Reputation (Boys' Estimate)	22	19	17

Partialling out the larger set of ten background and demographic characteristics (column 3) reduced even further the list of student outcomes for which we might demonstrate any unique school effects based on our set of school characteristics. Only 18 of the original 53 student outcomes show average absolute tenth-order partial correlations above .12. Among those which appear to have the highest level of unique association with the school characteristics are attitudes toward school, several of the racial attitudes, and the Duncan measure of aspired occupation.*

Average Correlations Across Time

A second technique used to identify student outcomes on which the schools may have had an impact was based on a comparison of the strength of school-outcome relationships across time. Suppose, for example, school size does have some effect on a student's sense of internal control; we would then expect the absolute correlation between school size and internal control to increase between Time 1 and Time 3.** In general, we would interpret increasing absolute correlations between school characteristics and student outcomes as evidence that those school characteristics are having an impact. We were able to examine such trends for all student outcomes which had been measured repeatedly. Table 9 shows the average absolute correlation between each student outcome and 32 selected school characteristics. (The 32 school characteristics are a selected subset of the 87 discussed earlier. They are identifiable by a check mark in the right-hand column of Table 7.) Unlike Tables 7 and 8, no partial correlations are presented in Table 9. Instead, the average zero-order correlation is given for each occasion on which the student outcome was measured.

For a number of the student outcomes, their average level of association with the 32 school characteristics remained about the same across time. This was true for the job information test, the test of political knowledge, status of aspired occupation, trust in people, self-esteem, happiness, and an index of negative affective states. Other student outcomes showed a level of association with the school characteristics which declined across time.

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* School reputation has an artificially high level of correlation because a slightly different measure of the same concept is in the predictor set. The same is true for some of the aptitude and ability measures.

** One can think of exceptions to this rule. For example, if large schools tended to receive students already high on internal control but such schools had the effect of lowering it over time, then the absolute correlation between school size and internal control would decrease, not increase. However, such conditions seem likely to be quite rare.

suggesting that determinants other than the school (or the family characteristics for which the school was a surrogate) may have been playing a greater role as time went on. In this class we find such variables as average grade in the previous year, delinquency and delinquent behavior in school, political alienation, relative job ambition, emotional dependence, and an index of somatic symptoms. The conclusion that we can draw about these variables (i.e. those with steady or declining levels of association with school characteristics) is that they are probably not outcomes which are affected by the high school experience.

There are, however, some variables which show increasing levels of association across time. For example, whether or not the students plan to go to college (which at the aggregate level of analysis amounts to the percent planning to attend college) shows an average absolute correlation of .14 with the selected school characteristics at Time 1. By Time 3, however, the correlation has increased to .18.

Such a finding is consistent with the hypothesis that at least some of the 32 school characteristics were having an influence on the college plans of the students, but it is by no means proof of that hypothesis. For one thing, some or all of the instances in which we observe rising correlations over time may be due to chance.* (Of the 30 student outcomes measured at three points in time, 12 showed fairly consistent upward patterns of average correlation, 8 showed fairly consistent downward patterns, and 10 yielded mixed patterns.) And even if the changes in correlations are valid, it is possible that some of the background variables with which these school characteristics covary may be responsible for the shifts, not the school characteristics themselves. (This latter possibility can be checked by multivariate analyses, such as those described below, which use background and school characteristics simultaneously in predicting to the student outcomes.) Nevertheless, used in conjunction with the other procedures described here, the procedure of examining correlations over time provides some useful information for identifying the subset of the student outcomes which have the greatest probability of showing school effects. In addition to college plans, the variables showing reasonable patterns of upward correlation across time included an index of the value placed on academic achievement, an index of conventional social values, an index of internal control (personal efficacy), an index of positive attitudes toward school, the stability of self-esteem, impulse to aggression, and the needs for self-development and self-utilization.**

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* We did not undertake the considerable task of estimating significance levels for the shifts in average absolute correaltions over time.

** We know from the analyses presented in Table 8 that several of the variables identified here as showing increasing relationships across time, have those relationships diminished nearly to the chance level when background and demographic characteristics are controlled. College plans, stability of self-esteem, and impulse to aggression are three prominent examples.

Table 9

Student Outcome Dimensions: Comparisons Across Time of the Average Correlation of Each with a Set of 32 School Characteristics
(N=78)

Student Outcome	Average Correlation with Outcome Measured at:*		
	Time 1	Time 2	Time 3
Knowledge and Achievement			
Job Information Test	24	23	25
Political Knowledge	20	20	17
Military Knowledge Test	--	--	15
Average Grade	15	13	12
Scholastic Aptitude Test: 2 times verbal plus math	--	--	20
Behaviors			
Rebellious Behavior in School	14	16	--

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* The numbers in each column indicate the average, absolute product-moment correlation between the student outcome (measured at the time indicated) and 32 selected school characteristics. The 32 school characteristics are identified by check marks in Table 7.

Table 9 (cont'd)

	Average Correlation with Outcome Measured at:*		
Student Outcome	Time 1	Time 2	Time 3
Delinquent Behavior in School	22	17	16
Total Delinquency	22	13	17
Working	6	12	14
Plans			
Duncan Status of Aspired Occupation	23	24	23
Certainty the Career Choice is a Good One	--	13	12
Probability of Dropping Out	10	12	--
College Plans (Yes/No)	14	16	18
Attitudes and Values			
Academic Achievement Value	14	18	20
Social Values Cluster	18	20	21
Internal Control (Rotter)	13	12	17
Trust in People	14	15	15
Anti-Vietnam Attitude	--	--	18
Political Alienation	15	14	13

Table 9 (cont'd)

Student Outcome	Average Correlation with Outcome Measured at:* Time 1	Time 2	Time 3
Race Attitude Indexes			
Perceived Discrimination	--	--	20
Preferred Social Distance	--	--	21
Favor Strong Gov't Role	--	--	21
Favor Individual Right to Discriminate in Housing	--	--	18
Composite Index	--	--	23
Preferred Social Distance/Residual Score with Region Controlled	--	--	15
Job Preferances			
"Job That Pays Off"	14	15	16
"Job That Doesn't Bug Me"	20	17	18
Relative Job Ambition	20	17	14
School Attitudes			
Postive	17	17	21
Negative	18	13	18
Interest in Courses	16	20	20
Self-Concept of School Ability	18	16	--

Table 9 (cont'd)

Student Outcome	Average Correlation with Outcome Measured at:*		
	Time 1	Time 2	Time 3
Affective States			
Self Esteem	13	13	13
Stability of Self Esteem	10	12	14
Level of Independence	9	15	14
Emotional Dependence	18	14	11
Impulse to Aggression	13	15	18
Social Support	13	13	11
Happiness	17	17	15
Somatic Symptoms	17	11	14
Negative Affective States	13	11	14
Motives			
Need Social Approval	15	--	--
Test Anxiety	13	12	--
Need for Self-Development	14	17	17
Need for Self-Utilization	11	12	16

Table 9 (cont'd)

Student Outcome	Average Correlation with Outcome Measured at:* Time 1	Time 2	Time 3
Aptitudes and Abilities			
Quick Test of Intelligence (T1)	22	--	--
Matrices Test (T1)	21	--	--
Gen. Aptitude Test Battery			
J (Verbal) (T1)	24	--	--
I (Math) (T1)	19	--	--
Gates Reading Test (T1)	27	--	--
Composite GATB-J, Gates (T1)	28	--	--
Quick Test Residual of Gates (T1)	--	--	--
School Reputation (Boys' Estimate)	--	22	--

Marginal Prediction from School Characteristics: Observed versus Chance Levels

Still a third approach was attempted to identify student outcomes on which we might demonstrate unique school effects. It consisted of running two multivariate predictions to each of the student outcomes, determining from those analyses the amount of marginal variance which could be explained by 23 school characteristics (beyond that which nine background and demographic factors could explain), and then comparing that marginal explanatory power to the level we might have expected under chance conditions. If the marginal explanatory power of the set turned out to be substantially higher than the chance level for some student outcomes, we would have substantial evidence of "unique" school effects.

The results of the multivariate analyses are presented in Table 10. Using linear multiple regression, we first predicted to each student outcome using all 32 characteristics previously selected from Table 7 as being the most important predictors. We then determined how much of that explanatory power might be due to the nine background and demographic variables (a subset of the 32 predictors) by running only those nine in a linear multiple regression predicting to each student outcome. (See the column A of Table 10 for the percent of variance explained by these nine variables.) The difference between the variance explained by all 32 variables and that explained by the subset of nine background variables is the percent of variance "uniquely" attributable to the remaining 23 school characteristics (column B).

We find, then, that somewhere between 7% and 63% of the between-school variance on each student outcome dimension can be uniquely explained by school characteristics other than those describing the student composition. The difficulty is, however, that with only 82 cases and some 23 predictors, one is certain to capitalize on sampling and measurement error to some extent; so we know that these numbers are misleadingly high. Therefore, we needed to determine the amount of unique variance we would expect to explain if we were only capitalizing on chance, in order to see how much better than chance we actually did.

One way of estimating the importance of chance would have been to assign 23 randomly generated values to each school, and then to run regressions predicting to the actual student outcomes using those randomly assigned predictors. The resulting multiple R^2 would tell us how well random variables predicted. But to do that correctly we would have needed to generate values for each random variable which had univariate distributions approximating those of the actual variables -- a rather complex procedure. It would have been easier to simply take the observed values on each predictor variable and to reassign each to a different school on a random basis. That way we would have had resulting univariate distributions which matched perfectly the original distributions, but still have had essentially random values for each school on each predictor.

However, if we had followed such a randomizing procedure independently for each of the 23 predictors, we would have expected to get 23 uncorrelated random predictor variables. Given that the school variables are somewhat intercorrelated in reality, as well as in our sample, a set of random predictors which were uncorrelated would not provide a truly comparable control situation.* Therefore, we decided the best procedure for assessing the probable role of chance in our predictor process was to randomly reassign to different schools the values on the 23 school characteristics taken as a set. Then if the values from school X, for instance, were chosen by random procedure for reassignment to school Y, school X's values on all 23 school variables would be reassigned to school Y. As a result, the randomly reassigned school characteristics have exactly the same pattern of intercorrelations as did the original set of variables in the actual sample.

Using the data generated by this procedure, we again ran linear multiple regressions to determine the extent to which chance might give unique "predictive"power to the 23 school characteristics taken as a set. Column C in Table 10 indicates how much variance was uniquely attributable to the randomly assigned set of school characteristics in predicting to each of the student outcomes. The values range from 5% to 48%, versus the 7% to 63% mentioned earlier as resulting from the actual observations. Column D indicates how much better the actual observations did than the randomly assigned observations in terms of percent of variance explained.

We find that for many student outcomes the actual observations did little or no better than randomly assigned ones. In fact, for 14 of the student outcomes the randomly assigned variables did a better job than the actual ones!

If the randomly assigned predictors did about as well as (or better than) the actual set of predictors for any student outcome variable, we obviously gave little credibility to the predictive value of the school characteristics in relation to that outcome. However, if the school characteristics uniquely accounted for substantially more of the between-school variance on any outcome than did their randomly assigned counterparts, we felt we had a reasonable chance of demonstrating important school effects on that outcome variable. Among the student outcomes which looked most promising against this criterion were average grades, rebellious behavior in school, total delinquency, positive and negative attitudes toward school, interest in coursework, academic achievement value, a cluster of social values, belief in internal control, several racial attitudes, preference for a "job that doesn't bug me", level of independence, personal happiness, needs for self-development and self-utilization, test anxiety,

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* Such comparability was important because uncorrelated random predictors would be expected to explain more variance on the average than correlated ones.

Table 10

Percent of Variance Uniquely Explained by a Set of 23 School Characteristics: Actual (Column B) vs Randomly Assigned (Column C)

Student Outcome	R^2 for 9 Background Var's A	Marginal R^2 for 23 School Char's B	Marginal R^2 for 23 Random Char's C	Col B minus Col C D	
Knowledge and Achievement					
Job Information Test	55	27	13	14	
Political Knowledge	20	32	19	13	
Military Knowledge Test	41	22	30	-8	
Average Grade (Sr. Year)	15	59	39	20	✓
Scholastic Aptitude Test: 2 times verbal plus math	36	35	36	-1	
Behaviors					
Rebellious Behavior in School (T2)	12	55	27	28	✓

Note: All school characteristics used as variables in these analyses are among the 32 checked in Table 7. The 32 are subdivided into two subsets: 9 background and demographic variables and the remaining 23 school characteristics in the set of 32. Linear multiple regression is the multivariate procedure used. The dependant variables (student outcomes) were measured at Time 3 unless otherwise indicated. (N=78)

A: Multiple R^2 (percent of variance explained) using the 9 background and demographic variables.

B: The arithemetic difference between the multiple R^2 using all 32 predictors and the multiple R^2 using only the 9 background and demographic variables.

C: Same procedure as Column B except that 23 randomly assigned school characteristics replaced the 23 actual school characteristics in the analyses.

Table 10 (cont'd)

Student Outcome	A	B	C	D	
Delinquent Behavior in School	25	22	19	3	
Total Delinquency	18	41	21	20	
Working in Sr. Year	29	27	31	-4	
Plans					
Duncan Status of Aspired Occupation	47	28	20	8	
Certainty the Career Choice is a Good One	17	33	43	-10	
Probability of Dropping Out (T2)	11	34	48	14	
College Plans (Yes/No)	37	29	23	6	
Attitudes and Values					
Academic Achievement Value	32	39	23	16	✓
Social Values Cluster	29	49	34	15	✓
Internal Control (Rotter)	23	43	24	19	✓
Trust in People	22	36	36	0	
Anti-Vietnam Attitude	28	18	22	-4	
Political Alienation	14	39	26	13	

Table 10 (cont'd)

Student Outcome	A	B	C	D	
Race Attitude Indexes					
Perceived Discrimination	47	17	27	-10	
Preferred Social Distance	36	37	20	17	
Favor Strong Gov't Role	21	52	18	34	✓
Favor Individual Right to Discriminate in Housing	33	37	22	15	
Composite Index	48	34	12	22	
Job Preferances					
"Job That Pays Off"	31	35	37	-2	
"Job That Doesn't Bug Me"	38	33	12	21	
Relative Job Ambition	15	42	29	13	
School Attitudes					
Positive	21	51	23	28	✓
Negative	16	54	25	29	✓
Interest in Courses	24	49	27	22	✓
Self-Concept of School Ability (T2)	23	30	29	1	

Table 10(cont'd)

Student Outcome	A	B	C	D	
Affective States					
Self Esteem	14	37	34	3	
Stability of Self Esteem	15	40	41	-1	
Level of Independence	21	42	21	21	✓
Emotional Dependence	14	45	44	1	
Impulse to Aggression	29	31	30	1	
Social Support	17	34	38	-4	
Happiness	15	49	23	26	✓
Somatic Symptoms	22	34	34	0	
Negative Affective States	19	44	33	11	
Motives					
Need Social Approval (T1)	23	39	31	8	
Test Anxiety (T2)	15	53	28	25	✓
Need for Self-Development	9	50	22	28	✓
Need for Self-Utilization	19	51	30	21	✓

Table 10 (cont'd)

Student Outcome	A	B	C	D	
Aptitudes and Abilities					
Quick Test of Intelligence (T1)	84	9	5	4	
Matrices Test (T1)	46	16	21	-5	
Gen. Aptitude Test Battery					
J (Verbal) (T1)	81	7	9	-2	
I (Math) (T1)	48	18	22	-4	
Gates Reading Test (T1)	75	11	10	1	
Composite GATB-J, Gates (T1)	78	9	10	-1	
School Reputation (Boys' Estimate)	31	63	29	34	✓

✓ A check mark in the far right hand column indicates that the student outcome was selected for further analysis at the individual (vs. school) level.

and school reputation.*

Final Selections

The student outcomes just mentioned overlap to a considerable extent the set of student outcomes we identified in Table 8 as having the highest average partial correlations with the full set of 87 school characteristics.** They also include six of the nine student outcomes identified in Table 9 as showing patterns of increasing average correlations across time with the subset of 32 school characteristics.*

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* Had more resources been available, we would have preferred to have multiple random trials so that the average marginal predictive power of randomly assigned sets of variables could be estimated across many trials.

In the absence of such resources, we did use an alternate procedure to estimate these average values -- that of treating the prediction to each separate student outcome variable as a separate trial in itself. These 53 "trials" (student outcomes) were grouped according to their initial level of variance explained by the nine background variables, and separate average values were calculated for each group. For instance, 17 student outcomes had between 11% and 20% of their variance explained by the background variables, so we had 17 "trials" in that group from which to estimate an average of expected level of unique variance which could be added using 23 random predictors. It came out to be 32%; so, for each of these 17 outcome variables, we compared the amount of marginal variance the real school characteristics added, to the 32% we would expect to be explained on an average random trial.

This procedure is admittedly a rudimentary one, since we know that these "trials" are not independent (i.e. the student outcomes are correlated to each other to some extent) and the shape of the univariate distributions of the various student outcomes may not be comparable; facts which could change the sampling statistics. As it turns out, however, the results were so similar to those from the single random trial that this correction procedure had rather little effect on the variable selection process. The only variable dropped from further consideration due solely to the results of this procedure was preference for a "job that doesn't bug me."

** The two student outcomes identified as predictable from school characteristics in Table 8 but not in Table 10 were the Duncan status of aspired occupation and preference for a job that "pays off".

We were encouraged by the amount of agreement shown by the three different methods in identifying the student outcomes which were most likely to reflect unique high school "effects". The fact that there was not perfect correspondence does not imply that the results were inconsistent, either, since each of the methods tested for different conditions that were likely to pertain if there were unique school effects, but none of which were sufficient to indicate for certain that there *were* unique school effects.**

We decided to retain for further analysis at the individual level fifteen of the variables identified above as having variance which might be uniquely explained by the school characteristics. (The 15 selected are indicated by a check in Table 10 in the right hand column.***) We held particular hopes for the six of those which also showed an increasing level of association with the school characteristics across time, since with those variables we would be in the best position to demonstrate that there was change *during the high school years* which led to their becoming uniquely associated with school characteristics. The next section will summarize briefly the fate of those 15 student outcomes in our subsequent efforts to find effects uniquely attributable to features of the school.

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* College plans, stability of self-esteem, and impulse to aggression are the other three outcomes which were not also flagged here as being uniquely predictable. It appears that background and demographic variables must have accounted for their increasing level of correlations over time with the school characteristics, since both Tables 8 and 10 show that once background variables are controlled, the relationship of these three student outcomes to either set of school characteristics (87 or 32) is hardly above chance.

** For example, the variable measuring students' college plans showed an increasing level of correlation across time with the set of school characteristics (Table 9), yet it was not a variable to which the school characteristics made a unique explanatory contribution at Time 3 (Table 10). A set of causal dynamics which would be consistent with both findings is imaginable. If, for example, students' college plans came to be more "in line with" their parents' socioeconomic level (SEL) as they got older, then those plans would also show an increasing level of association with school characteristics which happen to covary with family SEL. However, when we ask how much predictive power the school characteristics have by Time 3 *independently of their association with SEL*, it may be very little. Therefore, under these hypothetical circumstances, a "positive" finding under the procedure in Table 9 is not at all inconsistent with a "negative" finding under the procedure in Table 10.

*** All student outcomes were retained on which we could explain 15% more variance using the actual school characteristics than we could using the

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randomly assigned characteristics (i.e. the value in Table 10, Column D was .15 or above), with the following exceptions. The most predictable of the racial attitudes was kept but the other three eligible ones were dropped because of their conceptual similarity and high level of intercorrelation with the retained variable. Total delinquency was dropped in favor of rebellious behavior in school for similar reasons. Preference for a "job that doesn't bug me" was dropped because our corrections on the randomizing procedure suggested that the school variables did not perform much better than chance, had we used a number of random trials to estimate the role of chance.

THE SEARCH FOR SCHOOL EFFECTS

The data reduction procedure we have been discussing was based in part upon the predictive power of the school characteristics being examined, and it has already demonstrated that a great many characteristics of the schools failed to show predictive power to a broad set of student outcomes above and beyond what we would have expected by chance. Of those characteristics which showed effects greater than chance, many still were most parsimoniously explained by associated differences in the types of student bodies served. Nevertheless, an important set of variables did remain at the end of the data reduction process which gave some promise of demonstrating important effects which could be attributed uniquely to the schools.

The "acid test" was to come with the individual level of analysis, dealing with the total variance in individual outcomes rather than just that part of the variance associated with differences in school averages.* The results of our investigations at that level are summarized very briefly here: they will be spelled out in considerably more detail in future publications, including the next working paper in this series.

Effects of Student Composition

At the individual level of analysis, it is possible to assess the importance of any individual background characteristic (say SEL) and then to see whether an aggregate characteristic (say average SEL of the student body) contributes any further explanatory power over and above that already contributed by the individual's background score. If the aggregate characteristic does have some marginal explanatory power, we then have evidence for a "school effect" related to the composition of the student body.

The aggregate level of analysis however, does not permit us to separate individual level background effects -- which we already know are powerful -- from effects due to the composition of the student body. They are both reflected, in unknown proportion, in the aggregate score. As a result, when we partialled out aggregate SEL and other student background measures in the aggregate level analyses presented earlier, we were partialling out both kinds of effects. This fact is acceptable for our purposes of variable elimination, since we would probably credit student input variables with any predictive power which was attributable either to them or to some other school characteristics; but it does leave open the question of whether or not there are any school effects attributable to the composition of the student body.

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* We know, for example, that between-school differences account for only about 9% to 16% of the total variance in most student outcome variables. Therefore, any school characteristic is fated to appear substantially less important at the individual level of analysis than it did at the aggregate level. That is, it will show considerably lower correlations with student outcomes at the individual level.

The basic conclusion which results from the individual level analysis is that the composition of the student body contributes rather little explanatory power once individual background differences have been taken into account. For all student outcomes, the marginal percent of variance explained by the student composition was less than 2%. *

Effects of Other School Characteristics

Unfortunately, the results for school characteristics other than the student input variables were no more encouraging. Recall that among the other characteristics were variables describing the school's structure, organizational processes, transactions with the environment and intermediate outcomes.

Drawing upon the twenty-two school characteristics chosen from those categories in Phase III, we conducted a set of multivariate analyses at the individual level, predicting to each of a selected set of fifteen student outcomes. (The fifteen were selected from among the full set of fifty as being the most predictable marginally from school characteristics.) *In none of these analyses could we add more than 3% to the explainable variance using the five best school characteristics, once we had entered a set of seven demographic and background control variables.** *In other words, the school characteristics which at the aggregate level showed the most promise of demonstrating unique school effects, failed to fulfill that promise at the individual level of analysis.* We were able to attribute very little explanatory power to school variables, even when working with student outcomes and school characteristics which were specifically chosen to give us the best chance of demonstrating school effects.

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* In these analyses, the percent of variance explained by twelve variables (seven individual background characteristics and five demographic variables) was subtracted from the total variance explained by the same twelve in combination with five aggregate student body characteristics: the difference was defined as the marginal percent of variance explained. The student body characteristics used were: average socioeconomic level, average score on QT of intelligence, average score on the Gates reading test, average score on the GATB test of verbal ability (Part J), and the percent of black students in the school sample. Linear multiple regression was the analysis procedure used.

Discussion

These negative research results are indeed disturbing, partly because they are simply counter-intuitive for many of us, but also because they seem to raise a question of whether high schools play any role in the development of young people. Before jumping to overly pessimistic conclusions, however, it seems worth considering some of the many alternative explanations which could account for such negative results. Listed below is a fairly comprehensive set of such explanations -- some focusing on methodology, others on the actual state of affairs -- along with some commentary on the merits of each.

a. We failed to measure the really important high school characteristics or the particular student outcomes on which school impact is greatest.

> We are inclined to discount this explanation on the grounds that a very large and diverse set of school characteristics were, in fact, examined; and our set

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* For each of the fifteen student outcomes, we selected the set of five school characteristics (out of the twenty-two produced in Phase III) which would add the most explained variance over and above the variance contributed by the seven control variables. The sets were selected by doing a stepwise linear regression predicting to each student outcome, using the partial correlation table which resulted when the control variables were partialled out. The first five variables selected in each regression run were then used in a subsequent Multiple Classification Analysis (a nonlinear procedure) to see how much unique explanatory power they added. The control variables included region, urbanicity, socioeconomic level, index of positive family relations, GATB-J, and two student body characteristics -- average socioeconomic level and average GATB-J.

of student outcomes was also very diverse. It is true that the number of dimensions on which we studied academic achievement was rather limited, however, other studies which have tended to concentrate on achievement measures have returned rather similar findings. (Coleman, et al, 1966; Flanagan, et al, 1962).

b. Our measures were not valid.

Although this criticism may be accurate for some limited number of the many measures we examined, we conclude from our own and others' results that a substantial proportion of our measures are valid. Many, of course, were adopted after others had validated them, and most were checked for construct validity in our own very extensive analyses.

c. We failed to build constructs which captured the important characteristics, even though we may have secured the necessary raw data.

It is left to the reader to decide whether the techniques for concept development, described in detail in this working paper, were adequate. My own view is that, although with hindsight we can think of some improvements in the procedure, the pervasive absence of positive findings suggests rather strongly that other ways of combining the variables would not have led to different conclusions.

d. Important school characteristics tend to affect students on only a few of our many student outcome dimensions; therefore, they are inadvertently eliminated in a screening procedure which looks only at their average impact across many outcomes.

While we differ among ourselves about the seriousness of this possible criticism, it should be pointed out that a number of variables did show a discernible average impact at the aggregate level -- even with student inputs partialled out -- and that ultimately even they did not prove to be very important in explaining particular outcomes at the individual level.

e. Our analysis strategy may have missed some important school effects of a non-linear, masked, or interactive nature.

> While it is certainly possible that such effects do exist, the dearth of findings regarding important main effects does not bode well for this hypothesis. Also, recall that we did systematically search for non-linear effects at certain points -- though the search was far from exhaustive -- with basically negative results.

f. Certain features of the school really do make a difference for students, but they covary so strongly with student inputs that the latter are credited with their effects.

> This possibility was of particular concern, since we required school characteristics to show marginal explanatory power after student input effects were removed. Thus, at the aggregate level of analysis any shared explanatory power was credited to the student inputs. However, recall our earlier finding that student body characteristics derive their explanatory power primarily from the cumulated individual background effects which comprise them -- not from any effects of the social milieu. These individual background variables (like socioeconomic level) do not covary as strongly with school characteristics as do their aggregated counterparts (like average SEL). Therefore, it becomes possible in analyses at the individual level to separate their effects to a much greater extent from those of school characteristics than was possible with their aggregated counterparts.* When we do, we still find little evidence of effects due to different features of the schools.

g. High schools do not show any differential impacts because they are so similar to one another on their really important dimensions that they tend to have about the same effects on their students.

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* Put another way, SEL varies within schools as well as between schools. Therefore, we can compare students with the same level of SEL who go to quite different types of schools, even when aggregate SEL is highly correlated with the school characteristic in question.

> We are inclined to ascribe some validity to this argument, since there does seem to be a pervasive sameness in the organizational forms of the high schools we studied -- particularly in school structure. In the last few years some more radical departures have been attempted, but too recently to have been encompassed in this research and perhaps on too small a scale to show up in any representative national sample.

h. High schools do not appear to have differential impacts because students tend to compensate in other domains for things which are missing in their high school environments.

> We feel that there may be some validity to this hypothesis, as well, but have not as yet searched for supporting evidence.

i. High schools have no appreciable impact because most personality characteristics have stabilized by the time youngsters reach high school age.

> This hypothesis is undoubtedly true for a number of the student outcomes dealt with in this study. As Working Paper 10 will show, a number of student outcomes fail to show any meaningful patterns of change, even when examined in relation to a host of independent variables other than school characteristics. Certain person characteristics are undoubtedly fairly well established by age fourteen or fifteen.

j. High schools have proportionately little impact because other sources of influence (family, peers, media, etc.) tend to dominate the changes taking place during this stage of adolescence.

> There is no denying the fact that youth today are exposed to a much broader range of experiences than were earlier generations, due among other things to increasing urbanization, growth of the media, and increased mobility due to the automobile. If schools ever did explain much of the variation between students, it seems likely that their explanatory power has been diminished as these other windows to the

> outside world have been opened.
>
> Whether that means that they have little or no impact, however, is quite another question; and one which ultimately can be answered only by comparing their effects to those which would result in the absence of the school experience. Our findings regarding drop-outs suggest that, for those types of young men who tend to drop out, little of importance changes if they do leave school. (Bachman, et al, 1972.) Whether a comparable finding would result for other types of students is an open question; and its answer, of course, depends in large part on what alternative experiences would await them.

Each reader will undoubtedly have his own preferences among these hypotheses. My own interpretation of these important findings, albeit discouraging ones for educators, runs somewhat as follows.

We have shown that within the normal range of variation encountered in a representative national sample, a host of school characteristics which have long been held as "important" to student development, have virtually no *differential* impact. This is different than saying that they have no impact at all; and I want to make the distinction clearly, for the policy implications are substantially different. If, for example, we concluded that monetary and staff inputs had no effect, it would presumably make sense to cut them drastically. However, if we say that within a limited range they appear to have no differential impact, then the policy implications are quite different.

I think it likely that for a number of the student outcomes included in this study the schools probably do not have any impact, simply because individual differences on such dimensions have pretty much stabilized by the time young people reach high school age. But, for the many characteristics I presume have yet to stabilize, I am inclined toward the view that high schools do have some very real impacts -- but because of their basic institutional similarities, the impacts they have are not very different one from another.*

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* It is clearly the case that high schools have an impact on students, since they structure the time, activities, and peer associations of young people. Surely no one would argue that, if the schools ceased to exist, these aspects of youngsters' lives would be the same. The real question, then, is whether there is any lasting impact in terms of knowledge, aptitudes, values, attitudes, affective states, self-concept, plans, or behavior patterns.

Having said this, I want to hasten to add that I do not assume that the impacts schools have are all in a positive direction, nor that those that are in a positive direction are nearly as great as they might be. It seems to me distinctly possible that traditional schools tend to dampen initiative with their limited options and elaborate restrictions. It also seems likely that, although they impart some information to students which helps to prepare them for their adult family and occupational roles, a great deal more could be done. (Teachers and students seem to agree, judging from their answers regarding the objectives of the high schools.)

But how are we to determine on what dimensions the schools do have an impact, and to what extent do they impact, and how might they be improved? Our findings, taken together with those of others (Flanagan et al, 1962; Coleman et al, 1966) would suggest that more radical departures from the norm are what is needed: that the more diverse a set of experiences can be provided to comparable sets of students, the more we will learn about the impacts of those experiences (and of particular features of them) by contrasting them one to the other.

What seems called for is a major social experiment (probably of necessity funded by the Federal government) in which a set of truly diverse forms of "education" (as opposed to schools, per se) are created, and their impact compared. (Obviously problems of self-selection of students would have to be experimentally controlled for the results to be interpretable.)

Which specific alternatives might be tried is an open issue. I do not presume to know the one best way. However, I could make suggestions regarding alternatives that appear to me to be worth trying. Among them would be the termination of formal schooling at an earlier age, (which would allow us to compare the development in school to development in its absence). This would result in large numbers of young people entering civilian employment, military service, and (perhaps) college at an earlier age.

Another type of approach would be to try various kinds of work-study arrangements. There could be variations on such dimensions as length of service on each job, number of jobs tried during the high school years, ratio of school time to work time, and so on.

Finally, within the framework of formalized schooling, a great many departures of a fairly "radical" nature might be tried. Setting up organizational structures in which individuals are placed in charge of accomplishing specific goals and given the freedom to reorganize the curriculum accordingly, might be one such change.(See Johnston, 1970.) Another would be to create a school with a highly individualized program of study and perhaps no fixed curriculum requirements.

These examples are but a few of the many which might be generated. They are presented here largely to illustrate the range of departure from the norm which I think necessary to really improve the process of education, since it is my impression that the vast majority of the research conducted in the field focuses on relatively minor aspects of the whole process -- that the things which are always assumed as "givens" are in fact the key variables.

It is ironic in a way that such an important institution for the society as is its educational system has been the subject of so little systematic experimentation to improve it. But then, of course, its very importance is among the primary factors that have led us to be conservative in experimenting with it. It now seems time to open up the process, though in a prudent way -- to undertake some experiments which are major in their departures but limited in terms of the proportion of students they effect. The least successful approaches can be terminated with a minimum of harm. The more successful ones can then serve as models for adoption in the larger population of school systems.

Such an approach is, I believe, the most constructive one long term -- certainly far superior to our current one of tinkering with micro-factors -- and the one most likely to improve our system of universal education by substantial degree.

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APPENDIX A

APPENDIX A

INSTRUMENTS AND UNIVARIATE DISTRIBUTIONS

This appendix presents nearly all of the instrumentation in the Youth in Transition study which deals directly with high schools or people's experiences in them. Questionnaires to school staff members are presented in their entirety. The questionnaires and interviews administered to the young men in the study have been selectively excerpted here: complete instruments and spreads may be found in Working Paper 7 (Arscott, 1970).

The instruments are presented in the following order:

	No. of Respondents	Page
Principal: 1st Questionnaire	87	A-5
Principal: 2nd Questionnaire	87	A-25
Head of Counseling Questionnaire	87	A-50
Counselor Questionnaire	323	A-60
Teacher Questionnaire	2087	A-70
Boys' Interview at Time 1	2213	A-91
Boys' Interview at Time 2	1886	A-93
Boys' Questionnaire at Time 2	1886	A-112
Boys' Questionnaire at Time 3	1799	A-131
Boys' Questionnaire at Time 4	1620	A-139

Univariate Statistics

Within each instrument are presented the percentage frequency distributions of answers given by the set of respondents in question. The number of respondents on which the percentages are based appear in the above list. Missing data are included in the percentages, and the distributions are all based on weighted data. When frequency distributions were not convenient or appropriate, some or all of the following summary statistics were presented.

Statistic	Abbreviation
Mean	MN
Median	MED
Standard Deviation	SD
Maximum Value	MAX
Minimum Value	MIN
Missing Data	MD

Questions having open-ended response formats and nominally-scaled answer categories required the creation of answer codes. Many of these codes have also been inserted into the instruments.

Weighting

The data have been weighted in such a way as to *characterize the social environments faced by a national sample of high school boys.* Thus characteristics of large schools or their staffs are more heavily weighted, because they impinge upon more students. Put another way, tenth grade male students, not schools, were the basic sampling units for drawing the national sample.*

Operationally, this means that the data from each school are weighted by the number of boys in our original target sample for the school. These target samples (used here as weights) range from 13 to 55 boys, with an average of 29.7 and a standard deviation of 9.5. To take the principal questionnaire as an example, each principal's answer is weighted by the number of tenth-grade boys we tried to sample in his school in the Fall of 1966. If we look at the first question concerning the grade structure of the school, we find that 36% of our national sample of tenth grade boys were in schools containing grades 10-12, 43% in schools containing grades 9-12, and so on. This frequency distribution provides an unbiased estimate of the percent of such boys in the national population who were in schools of each type.*

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* The rationale for this decision is discussed in the Research Design section of this document and is treated in more depth by Bachman, et al (1967), pp. 21-23.

Principals and Heads of Counseling Weights applied to data from the two roles having a single respondent per school — the principal and head of counseling -- contain only this first weighting factor. Therefore:

Principal Weight = No. of boys in target sample at that school

Head of Counseling Weight = No. of boys in target sample in that school

Teachers and Counselors An additional weighting factor had to be taken into account with teacher and counselor questionnaires, to which there were multiple respondents from each school. We needed to correct for the fact that different schools had different-sized samples and also differential response rates.** To do this, we assigned weights to each respondent which were inversely proportional to the total number of such respondents from a school. Therefore, if there were 20 teachers responding from one school, each received a weighting factor of 1/20th; and if there were 40, each received a weighting factor of 1/40th. As a result the cumulative weight of all responding teachers in each school totalled to one on this factor. The same was true for counselors.

This factor was introduced independently of the weighting factor already mentioned; namely, the number of boys in the target sample in each school. Therefore, when the two are applied in combination to each respondent's answer, they have a multiplicative effect, as the following formulas indicate:

$$\text{Teacher Weight} = \frac{\text{No. of boys in target sample in that school}}{\text{No. of teacher respondents in that school}}$$

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* Recall that the total target sample was a representative national sample of young men beginning tenth grade in public high schools in the continental United States during the Fall of 1966. All private and parochial schools were excluded from the sampling universe. The fact that only males were included meant that all-male schools were in a sense overrepresented from the universe of public schools. Our sample, however, contained only 2 all-male schools, so the distributions on staff questionnaires in this appendix would probably be little different had both male and female students been included in the study.

** The teacher response rate by school ranged from a high of 90% to a low of 36%. The average response rate was 69% with a standard deviation of 13.6%.

$$\text{Counselor Weight} = \frac{\text{No. of boys in target sample in that school}}{\text{No. of counselor respondents in that school}}$$

The statistics which emerge when these weights are applied to the answers of our teacher sample are estimates of the population statistics which would result if we drew a national sample of boys (as we did), randomly selected one responding teacher in the same school for each boy, and then summarized the answers of those teachers. *These results should be very close approximations of answers from a national sample of high school teachers, and are perhaps most easily thought of in those terms.* * A parallel statement can be made for high school counselors.

Students The boys' instruments were administered at several points in time and therefore contain data from somewhat different numbers of respondents, due to panel attrition. All of those who responded at each occasion have been included.

Weights ranging from one to three were assigned to each respondent at Time 1 to bring every school's sample up to its target sample size, and individuals then retained the weights assigned to them throughout the study. However, the effects of this weighting procedure are very minor, since only 299 original cases were double-weighted and only one case was triple-weighted.

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* Any differences between our statistics and those which would result from direct national samples of teachers would be due to (a) the fact that student-teacher ratios are not the same in each school and (b) girls were not part of our initial student sample. We believe that adjustments to correct for these differences would have extremely small effects on the expected results.

FIRST QUESTIONNAIRE TO PRINCIPALS

INSTRUCTIONS

1. Please answer all questions, if possible.

2. When percentages are called for and you do not have percentages readily available, please include the absolute numbers. For example, if you have 1235 students in your school and 270 students are in the 12th grade, an appropriate answer to the question "What percentage of your students are in the 12th grade?" would be either 22% or 270/1235. (It is essential that the figure 1235 be included so that we can calculate the percentage.)

3. If you are unsure of a number or percentage which is asked for, we would appreciate your best estimate. If you feel that your answer is a "wild guess," you might write "rough estimate" next to the answer.

4. We encourage you to make any comments you desire, particularly comments which elaborate your answer or note any unusual circumstances you think we should know about in interpreting your answers.

SURVEY RESEARCH CENTER
UNIVERSITY OF MICHIGAN

University of Michigan School Number ________

All responses to this questionnaire will be kept strictly confidential and will be identified by code number only.

A. SCHOOL AND COMMUNITY CHARACTERISTICS

1. What are the grades included in your school? (Please check one.)

9	1. K-12 or 1-12
12	2. 7-12
1	3. 8-12
43	4. 9-12
36	5. 10-12
0	6. Other (specify)______________

2. Please indicate the number of feeder schools from which your school regularly receives pupils into its lowest grade.

MN=4.9 MED=2.0 SD=11.4 MIN=0 MAX=96 MD=3%

3. Does your school receive nearly all of the students graduating from those feeder schools? *76* yes *17* no *7 MISSING DATA*

If not, what is the basis on which some students go to other schools? (Such as ability, program, geographical boundaries, etc.)

10	*geographical boundaries*	*1*	*program plus ability requirements*
1	*program of study*	*1*	*freedom of choice within city*
1	*ability requirements*	*85*	*MISSING DATA*

4. How many high schools does your school system contain?

MN=7.1 MED=2.0 SD=14.5 MIN=1 MAX=78

5. Pupils attending grades 10-12 in your school come from areas which are best described as primarily

22	1. Rural
19	2. Small town (under 15,000)
15	3. City of 15,000 - 50,000 - not a suburb
17	4. Suburb - residential area
3	5. Suburb - industrial or commercial area
7	6. City (over 50,000) - residential area
4	7. City (over 50,000) - industrial or commercial area
14	8. City (over 50,000) - scattered areas.

6. Which of the following community facilities are readily available to the students in your school. (Mark all that apply.)

92	1. Public library	60	10. Public recreation center
34	2. Museum	77	11. Public swimming facilities
16	3. Opera	27	12. Zoo
52	4. Concerts	32	13. Art gallery
45	5. Community or ameteur theatre	45	14. Teen-age centers
20	6. Legitimate professional stage	54	15. YMCA
34	7. Professional sports events	50	16. Future Farmers of America
64	8. 4-H chapter	74	17. Future Teachers of America
96	9. Boy scouts (or similar organization)		

B. ENROLLMENT AND ATTENDANCE

1. What is the approximate total enrollment in your school, including all grades?

MN=1451 MED=1203 SD=932 MIN=148 MAX=5392

2. Please write in the active enrollment in your school at the start of the 1966-67 school year.

Grade	No. of Boys				No. of Girls			
	MN	*MED*	*SD*	*MD*	*MN*	*MED*	*SD*	*MD*
10	229	166	231	1%	196	167	156	1%
11	204	149	210	1%	170	147	133	1%
12	181	134	194	1%	159	141	117	1%
Ungraded	6	0	23	1%	3	0	12	1%

3. Which of the following best describes the changes which have occurred in the enrollment of grades 10-12 compared to this time last year?

1	1. Up 21% or more	18	6. Down 1-5%
6	2. Up 11-20%	5	7. Down 6-10%
12	3. Up 6-10%	1	8. Down 11-20%
31	4. Up 1-5%	0	9. Down 21% or more
25	5. Unchanged	1	*MISSING DATA*

4. About what percentage of the grades 10-12 pupils attending your school this year transferred in from a different school last year? (Include only transfers in, not students coming in from your regular feeder schools.)

MN=4.4% MED=4.0% SD=3.6% MAX=17% MD=3%

5. About what percentage of last year's 10th and 11th-grade classes have transferred to a different school? (Include only transfers out, not students who were expelled or dropped out of school.)

MN=3.7% MED=2.0% SD=3.2% MAX=16% MD=1%

6. In the table below please indicate the number of boys who dropped out of or were expelled from your school during the 1966-67 school year and the preceding summer. Please do not count students who transfer to other schools as "drop-outs." Likewise, do not count temporary suspensions as "expulsions."

(We would prefer this information for the year 1966-67 and for it to be broken by grades and intervening summers. However, if you only have information available in another format or for another year, please include that information.)

Grade	Drop-outs				Expelled			
	MN	*MED*	*SD*	*MD*	*MN*	*MED*	*SD*	*MD*
During 10th grade	14.0	8.0	20.6	13%	1.0	0.0	3.7	9%
During summer following 10th	3.8	0.0	16.7	15%	0.0	0.0	0.3	11%
During 11th grade	13.0	8.0	19.8	13%	0.7	0.0	2.4	9%
During summer following 11th	1.8	0.0	4.4	15%	0.0	0.0	0.3	11%
During 12th grade	8.1	5.0	10.8	13%	0.6	0.0	2.3	9%

7. What is the maximum age at which a student is required by law to attend school in your state?

2	1.	No maximum age specified by law
0	2.	13 years old
0	3.	14
2	4.	15
74	5.	16
8	6.	17
15	7.	18
0	8.	Other (specify)_________

8. How well is the compulsory attendance law enforced in your school district?

2	1.	There is no such law
1	2.	Never enforced
5	3.	Seldom enforced
13	4.	Moderately enforced
36	5.	Usually enforced
41	6.	Always enforced
2		*MISSING DATA*

9. Estimate the average daily percentage of absenteeism in grades 10-12 in your school over the current school year.

MN=6.4% MED=5.0% SD=3.3% MIN=1 MAX=20 MD=7%

10. Approximately how long is the academic school day for pupils (excluding lunch time)?

0	1.	4 hours or less
0	2.	4 1/2 hours
4	3.	5 hours
4	4.	5 1/2 hours
40	5.	6 hours
26	6.	6 1/2 hours
5	7.	7 hours
0	8.	7 1/2 hours
21	9.	8 hours

C. SCHOOL PROGRAMS AND FACILITIES

1. What is the size of the average instructional class in your school? (Excluding physical education and special classes for the physically and emotionally handicapped.)

MN=26.4 MED=26.0 SD=4.8 MD=2%

2. In dollars per year, what was the average per-pupil expenditure for all purposes last year (grades 10-12)?

MN=$557 MED=$540 SD=$224 MD=29%

3. About what percentage of your grade 10-12 boys are in each of the following school programs?

MN	MED	SD	MD	
47%	50%	23%	4%	1. College Preparatory
10%	9%	10%	4%	2. Commercial and/or Distributive education
11%	10%	11%	8%	3. Vocational, Industrial, and/or Trade
4%	0%	9%	7%	4. Agricultural
28%	25%	25%	7%	5. General Diploma (not one of the above)
0%	0%	1%	15%	6. Other (please specify) ____________ ____________

4. What percent of your grade 10-12 boys are in a work-study program?

MN=3.3% MED=2.0% SD=4.7% MD=2%

5. Does your school have grouping or tracking of students according to ability or achievement?

73	1. Yes, for all students
9	2. Yes, for highest achieving students only
3	3. Yes, for lowest achieving students only
0	4. Yes, for some other reason (please specify) ________
13	5. No
1	MISSING DATA

6. If you answered the previous question "yes," check which of the following best describes your system of grouping.

70	1. Pupils may be in different groups or tracks for different subjects, depending on their ability in that subject.
9	2. Pupils are placed in a particular group or track and attend all classes within that group.
0	3. Other (please specify) __________
21	MISSING DATA

7. For which of the following special groups does your school provide special separate classes in grades 10-12? (Mark as many as apply.)

% YES	
58	1. Low IQ or mentally retarded
11	2. Behavior or adjustment problems
46	3. Rapid Learners
35	4. Special Skills or Talents (e.g., art, music, science)
37	5. Math difficulty
58	6. Reading difficulty
22	7. Speech difficulty
55	8. English difficulty
6	9. Other special groups (please specify)__________________ _____________________

8. Which of the following teaching aids are used in your school in grades 10-12? (Mark as many as apply.)

% YES	
95	1. In-class instructional films
30	2. Team teaching
6	3. Closed-circuit T.V.
43	4. Programmed Textbooks
20	5. Teaching Machines
5	6. Computer Assisted Instruction
25	7. Regular use of large lectures (50 or more students)

9. Apart from individual counseling of students, does your school provide any education about vocations? (Check as many as apply.)

% YES	
76	1. Special assembly speakers
82	2. Films on vocations or vocational choice
25	3. Career Day (attendance required)
38	4. Career Day or Evening (voluntary attendance)
34	5. Special courses on occupations
6	6. Other (please specify) ____________________

10. Can you tell us about what percentage of your graduating boys last year went on to some post-high-school education or training of some kind other than a 2 or 4-year college? (for example, beauty school, technical-vocational school, business school, etc.)

54	1. Yes, we have reasonably accurate information on this subject. The percentage is ________%.
38	2. We are not really sure, but our best guess is ______%.
9	3. No, we do not have this information.

MD= 10.6%
MED= 8.0%
SD= 8.6%
MD= 8 %

11. Can you tell us about what percentage of the boys who graduated from your school last year is now enrolled in a regular 2-year or 4-year college?

76	1. Yes, we have reasonably accurate information on this subject. The percentage is __________%.
24	2. We are not really sure, but our best guess is _______%.
0	3. No, we do not have this information.

MN= 42.7%
MED=43.0%
SD= 21.1%

12. Which of the following extra-curricular activities are offered by your school? (Mark as many as apply.)

% YES		
89	1.	Student Government
94	2.	School newspaper
88	3.	School magazine and/or annual
99	4.	Inter-school athletics for boys
65	5.	Inter-school athletics for girls
76	6.	Intramural athletics for boys
79	7.	Intramural athletics for girls
98	8.	Orchestra and/or band
89	9.	Glee club
2	10.	Fraternities, sororities, or other exclusive social clubs
82	11.	National Honorary Society
66	12.	Subject matter clubs (as math club, music club, Latin club, etc.)
51	13.	Chess club
34	14.	Hobby clubs (as stamp club, model airplane club, Hi-Fi club, etc.)
88	15.	Drama, plays
51	16.	Debate
84	17.	Dances
10	18.	Military cadets
70	19.	Service clubs (as Key club, wheel club, Hi-Y, etc.)
15	20.	Religious clubs (as Newman club, etc.)
13	21.	Other (specify)

13. If there are any activities going on at your school which you think are particularly innovative or unique (other than ones already mentioned above), could you briefly describe them below:

VERY FEW RESPONSES WERE GIVEN FOR THIS QUESTION

D. CHARACTERISTICS OF SCHOOL STAFF

1. How many full-time teachers are on your entire teaching staff (including all grades) this school year (1966-67)? (Exclude counselors and administrative personnel.)

   MN=67 MED=57 SD=44 MIN=13 MAX=284 MD=2%

2. How many full-time teachers, who were on your staff at the beginning of the 1965-66 school year, did not return for the 1966-67 school year?

   MN=9 MED=8 SD=6 MD=7%

3. How many new full-time teachers did you add to your staff to begin the 1966-67 school year?

   MN=10 MED=8 SD=9 MD=5%

4. How many teachers would you estimate that you have teaching grades 10-12 in full-time equivalents? (For example, three teachers teaching half-time would be 1.5 full-time equivalents.)

   MN=54 MED=47 SD=39 MD=2%

5. What percentage of your teachers are:

		MN	MED	SD
____%	1. White	91.6%	100%	24.4%
____%	2. Negro	8.0%	0%	24.4%
____%	3. Other	0.3%	0%	1.1%

6. What percentage of your students are:

		MN	MED	SD	MD
____%	1. White	86.1%	98.0%	28.7%	0%
____%	2. Negro	12.6%	1.0%	28.6%	2%
____%	3. Other	1.5%	0.0%	4.2%	3%

7. Are you (the principal):

93	1. White	99	a. Male
7	2. Negro	2	b. Female
0	3. Other		

8. How many years have you been the principal of this school?

   MN=6.8 MED=4.0 SD=9.1 MIN=1 MAX=43 MD=18%

9. Do you devote any of your time to classroom teaching?

6	1. Yes, about ______%	*MN=27 MED=30 SD=12 MD=84%*
76	2. No	
19	*MISSING DATA*	

10. In full-time equivalents, how many guidance counselors do you have in your school?

    MN=3.3 MED=3.0 SD=2.3 MD=3%

E. PROBLEM BEHAVIOR

For each of the following areas, indicate the degree to which there are problems with the students in this school. (Indicate one answer for each row, . through 7.)

	a. No problem at all	b. Slight problem	c. Moderate problem	d. Considerable problem	e. Severe problem	*MISSING DATA*
1. Destruction of school property	6	57	12	2	0	23
2. Impertinence and discourtesy to teachers	9	53	15	0	0	23
3. Tension between racial or ethnic groups	53	20	3	0	0	23
4. Stealing of a serious nature (money, cars, etc.) .	20	46	9	2	0	23
5. Physical violence against teachers	76	1	0	0	0	23
6. Use of narcotics or stimulants	53	20	1	1	0	26
7. Drinking intoxicants on school property	54	21	1	0	0	24

F. TITLE I PROGRAMS *(PERCENTAGES NOT CALCULATED)*

1. Is your school in an area which is eligible for assistance from Title I of the Elementary and Secondary Education Act.

( ) 1. Yes
( ) 2. No (Please skip questions 2, 3, and 4)
( ) 3. Don't know (Please skip questions 2, 3, and 4)

2. Are there any projects currently under way in your school which receive partial or total funding under Title I?

( ) 1. Yes: how many? ________
( ) 2. No (Please skip question 3)

3. Have any of the Title I projects in your school involved 10th-grade boys during the 1966-67 school year?

( ) 1. Yes
( ) 2. No

If "yes," about what percentage of the tenth-grade boys would you estimate are involved? _______%

4. Do you anticipate having any Title I projects in the next two years which will affect boys in the 11th or 12th grades?

( ) 1. Yes
( ) 2. No

If "yes," about what percentage of the boys in those two classes would be involved? ________%

G. ORGANIZATIONAL STRUCTURE AND PROCESSES

1. On the average, how many courses do you change per year? (By "change," we mean add to the curriculum, delete from the curriculum, or substantially revise.)

   MN=3.2 MED=3.0 SD=2.2 MD=25%

A number of the following questions ask how much influence various people or groups in the school exercise when certain decisions are made. We would like your answers to reflect how much they actually do influence the decision on the average - not how much they could influence it.

2. How much influence do you feel each of the following groups usually exercises in determining what changes are made in your school's course offerings. (CHECK ONE BOX ON EACH LINE)

	Little or no influence (1)	Some influence (2)	Moderate influence (3)	Considerable influence (4)	A great deal of influence (5)	*MISSING DATA*
a. Superintendent's Office and School Board (combined).	15	9	19	19	14	24
b. Principal.	1	3	20	21	32	23
c. Asst. or Vice-Principal(s)	7	13	18	17	7	30
d. Guidance Counselors.	3	20	31	15	3	28
e. Teachers*.	1	11	25	32	9	23
f. Students*.	13	32	19	10	3	23
g. (Other: please specify) ___________	0	0	0	5	0	95

3. How much influence do you feel each of the following groups usually exercises in determining whether a particular teacher will be hired by (or transferred into) your school? (CHECK ONE BOX ON EACH LINE)

	(1)	(2)	(3)	(4)	(5)	*MISSING DATA*
a. School Board	32	16	13	5	8	26
b. Superintendent's Office	5	9	7	27	28	24
c. Principal	0	5	15	20	36	23
d. Asst. or Vice-Principal(s)	21	14	9	8	7	41
e. Teachers*.	44	26	1	2	0	27
f. (Other: please specify) *Union*	0	0	0	1	0	99
Department Head	0	0	1	3	3	93

*taken individually and/or as a group.

4. How much influence do you feel each of the following groups usually exercises in determining whether any teacher will be dismissed from (or transferred out of) your school? (CHECK ONE BOX ON EACH LINE)

	Little or no influence (1)	Some influence (2)	Moderate influence (3)	Considerable influence (4)	A great deal of influence (5)	MISSING DATA
a. School Board	22	15	11	11	16	26
b. Superintendent's Office	7	4	13	17	35	24
c. Principal	0	5	7	18	46	24
d. Asst. or Vice-Principal(s)	13	10	15	14	8	40
e. Teachers*.	48	17	6	1	0	28
f. (Other: please specify) *Union*	0	0	0	0	0	100
Department Head	0	1	2	2	5	90

5. Of the boys in grades 10-12 who are expelled (not temporarily suspended) from this school, about what percentage are expelled because they have broken a specific rule which automatically requires expulsion? (In contrast to situations where the decision to recommend expulsion is at the discretion of some school officer.) For instance, you would include boys expelled under a rule which says "anyone suspended from school five times will automatically be expelled."

% of total expulsions are prescribed automatically by school policy. *MN=9% MED=0% SD=27% MD=37%*

6. In situations where expulsion is not automatic, how much influence do you feel each of the following groups usually exercises in deciding whether a student should be expelled. (CHECK ONE BOX ON EACH LINE)

	(1)	(2)	(3)	(4)	(5)	MISSING DATA
a. Superintendent's Office and School Board	10	9	7	7	30	38
b. Principal.	0	2	4	14	45	35
c. Asst. or Vice-Principal(s)	2	2	12	17	17	49
d. Guidance Counselor(s)	7	11	26	11	7	39
e. Teachers*.	10	12	28	11	3	36
f. Students*.	42	14	1	1	1	41
g. (Other: please specify) __________						

*taken individually and/or as a group.

7. How much influence do you feel each of the following groups usually exercises in determining the salary schedule of your teachers?

	Little or no influence (1)	Some influence (2)	Moderate influence (3)	Considerable influence (4)	A great deal of influence (5)	*MISSING DATA*
a. School Board	2	1	3	18	53	24
b. Superintendent's Office	3	0	9	13	50	25
c. Principal	29	21	20	3	1	27
d. Asst. or Vice-Principal(s)	30	19	8	0	1	42
e. Teachers*	12	9	10	29	13	27
f. (Other: please specify) ________	0	0	0	4	4	93

8. For each program of study offered at your school, please indicate whether some individual or committee is responsible for planning and administering that program. Write in the title of the person or name of the committee (include the principal where appropriate) next to each program. *(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)*

	Title of Person or Committee
1. College Preparatory	________
2. Commercial and/or Distributive	________
3. Vocational, Industrial, and/or Trade	________
4. Agricultural	________
5. General Diploma (not one of above)	________
6. Other (specify)	________
________	________
________	________

9. If you have one or more assistant principals (or vice principals), please briefly describe the major activities or responsibilities of each one. *(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)*

1. ________

2. ________

(use overleaf if necessary)

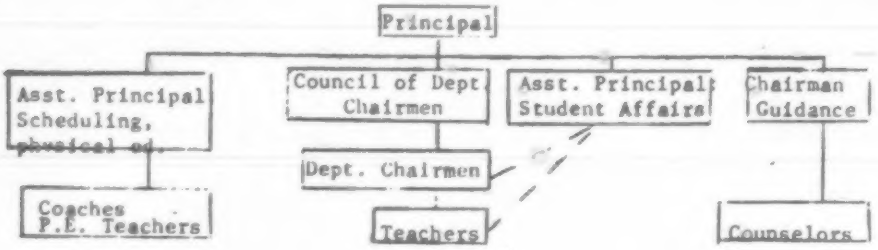
An important part of this study will be to gain an improved understanding of the organizational structures of American High Schools. We would appreciate your taking a few minutes to complete a chart of the different positions in your high school organization.

Several illustrations are given on the next page. Please note that a solid line indicates a direct line of authority - one person would identify the other (above him) as his immediate superior. A dotted line indicates that one office has a coordinating or advisory role in relation to the other (often referred to as a "staff" relationship.) Include important committees, coordinators and directors, and important relationships to other positions in the school system. (Feel free to add any explanatory comments and to detach the last page of this questionnaire for easy reference.)

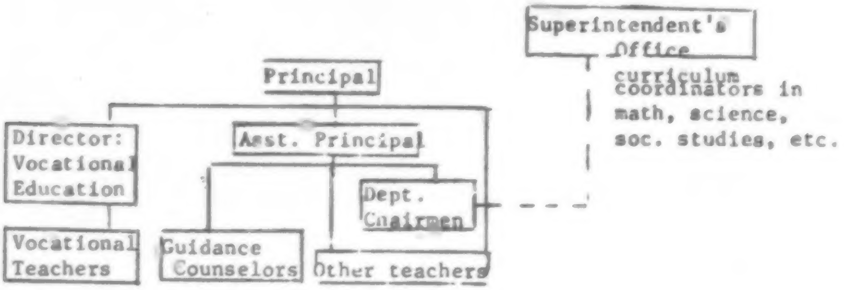
(CHARTS WERE RECEIVED FROM 73% OF THE RESPONDENTS.)

High School Principal

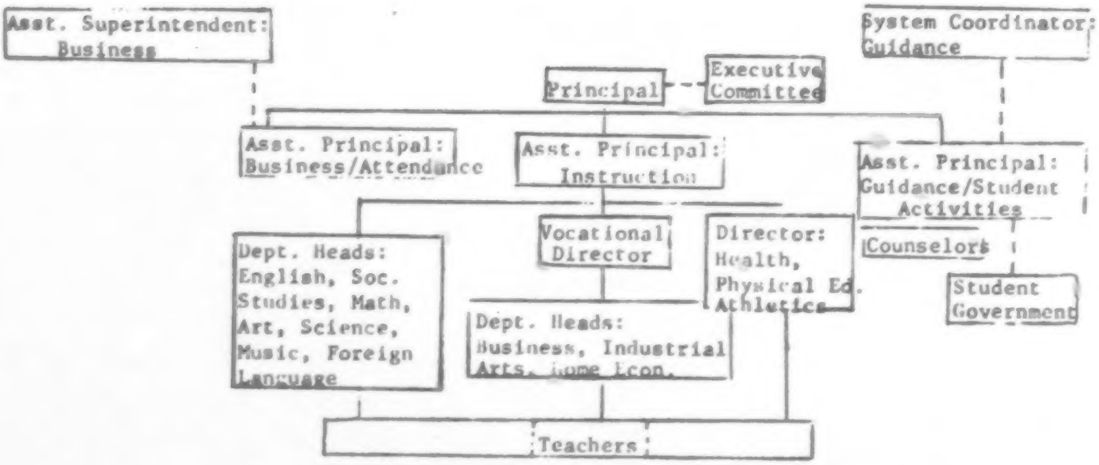
SOME EXAMPLES OF ORGANIZATION CHARTS


Principal
Asst. Principal Scheduling, physical ed.
Coaches P.E. Teachers
Council of Dept Chairmen
Dept. Chairmen
Teachers
Asst. Principal: Student Affairs
Chairman Guidance
Counselors

* *


Superintendent's Office
curriculum coordinators in math, science, soc. studies, etc.
Principal
Director: Vocational Education
Vocational Teachers
Asst. Principal
Guidance Counselors
Dept. Chairmen
Other teachers

* *


Asst. Superintendent: Business
System Coordinator: Guidance
Principal
Executive Committee
Asst. Principal: Business/Attendance
Asst. Principal: Instruction
Asst. Principal: Guidance/Student Activities
Counselors
Student Government
Dept. Heads: English, Soc. Studies, Math, Art, Science, Music, Foreign Language
Vocational Director
Director: Health, Physical Ed. Athletics
Dept. Heads: Business, Industrial Arts, Home Econ.
Teachers

ADMINISTRATION OF PROGRAMS OF STUDY

8. For each program of study offered at your school, please indicate whether some individual or committee is responsible for planning and administering that program. Write in the title of the person or name of the committee (include the principal where appropriate) next to each program.

	Title of Person or Committee
1. College Preparatory	
2. Commercial and/or Distributive	
3. Vocational, Industrial, and/or Trade	
4. Agricultural	
5. General Diploma (not one of above)	
6. Other (specify) ____________	

COLLEGE PREPARATORY

Breakdown of those having program offered:

	% MENTIONED 1st	*2nd*	*3rd*	*Total*
1. Coordinator	*0*	*0*	*0*	*0*
2. Principal	*42*	*0*	*0*	*42*
3. Assistant Principal	*5*	*2*	*0*	*7*
4. Department Heads	*8*	*12*	*1*	*21*
5. Guidance Counselors	*10*	*10*	*3*	*23*
6. Teachers	*1*	*6*	*3*	*10*
7. Administrative Council, etc.	*7*	*3*	*1*	*11*
8. System/District educators	*4*	*5*	*3*	*12*
9. County/State wide educators	*0*	*1*	*0*	*1*

Have program, but no one with administrative responsibility	*2*
Don't have program	*10*
Missing data on existence of a coordinator	*12*

(CONTINUED ON FOLLOWING PAGE)

ADMINISTRATION OF PROGRAMS OF STUDY (continued)

COMMERCIAL AND/OR DISTRIBUTIVE

Breakdown of those having program offered:	% MENTIONED			
	1st	2nd	3rd	Total
1. Coordinator	4	0	0	4
2. Principal	28	1	0	29
3. Assistant Principal	2	0	0	2
4. Department Heads	24	11	1	36
5. Guidance Counselors	1	9	0	10
6. Teachers	3	9	2	14
7. Administrative Council, etc.	1	4	1	6
8. System/District educators	4	4	3	11
9. County/State wide educators	0	0	1	1
Have program, but no one with administrative responsibility				0
Don't have program				18
Missing data on existence of a coordinator				14

VOCATIONAL, INDUSTRIAL, AND/OR TRADE

Breakdown of those having program offered:	% MENTIONED			
	1st	2nd	3rd	Total
1. Coordinator	11	0	0	11
2. Principal	23	5	0	28
3. Assistant Principal	0	1	0	1
4. Department Heads	19	8	4	31
5. Guidance Counselors	1	9	2	12
6. Teachers	4	4	1	9
7. Administrative Council, etc.	1	3	1	5
8. System/District educators	2	2	2	6
9. County/State wide educators	1	0	0	1
Have program, but no one with administrative responsibility				0
Don't have program				25
Missing data on existence of a coordinator				12

(CONTINUED ON FOLLOWING PAGE)

ADMINISTRATION OF PROGRAMS OF STUDY (continued)

AGRICULTURAL

Breakdown of those having program offered:	% MENTIONED 1st	2nd	3rd	Total
1. Coordinator	2	0	0	2
2. Principal	8	1	0	9
3. Assistant Principal	0	0	0	0
4. Department Heads	1	1	0	2
5. Guidance Counselors	2	2	0	4
6. Teachers	10	1	2	13
7. Administrative Council, etc.	2	2	1	5
8. System/District educators	0	2	0	2
9. County/State wide educators	0	0	0	0
Have program, but no one with administrative responsibility				0
Don't have program				70
Missing data on existence of a coordinator				5

GENERAL DIPLOMA

Breakdown of those having program offered:	% MENTIONED 1st	2nd	3rd	Total
1. Coordinator	0	0	0	0
2. Principal	37	0	0	37
3. Assistant Principal	3	1	0	4
4. Department Heads	7	10	1	18
5. Guidance Counselors	4	9	3	16
6. Teachers	0	8	4	12
7. Administrative Council, etc.	1	3	1	5
8. System/District educators	8	1	4	13
9. County/State wide educators	0	1	0	1
Have program, but no one with administrative responsibility				4
Don't have program				20
Missing data on existence of a coordinator				16

MAJOR ACTIVITIES AND RESPONSIBILITIES OF ASSISTANT PRINCIPALS

9. If you have one or more assistant principals (or vice principals), please briefly describe the major activities or responsibilities of each one.

TOTAL NUMBER OF ASSISTANT PRINCIPALS MENTIONED

MN=1.2 MED=1 SD=1.0 MIN=0 MAX=5 MD=1%

PERCENT HAVING NO ASSISTANT PRINCIPALS: 25%
PERCENT HAVING ASSISTANT PRINCIPALS BUT NOT LISTING FUNCTIONS: 4%

PERCENT MENTIONING EACH OF THE FOLLOWING FUNCTIONS FOR ONE OR MORE ASSISTANT PRINCIPALS (BASED ON ALL SCHOOLS):

	MANAGING PUPIL PERSONNEL
17	*In general; student welfare; student personnel coordination; all student issues and problems (incl. counseling students)*
52	*Discipline; counseling and discipline referrals*
2	*Interviews with parents*
5	*Student registration; admission*
35	*Student extracurricular activities (incl. athletics)*
4	*Safety patrol; fire drills, emergency; hall supervision*
	MANAGING TEACHER PERSONNEL
8	*"Personnel" in general; faculty problems; staff requirements*
9	*Substitute teacher assignments*
2	*Practice teacher program in schools*
2	*In-service teacher training; orientation of new teachers*
23	*Teacher supervision; teacher evaluation*
1	*Director of Vocational Education*
	MANAGING "OTHER" PERSONNEL
13	*"Plant management," "building control" in general; custodial and maintenance; "organization"*
3	*In charge of office personnel*
5	*Transportation*
3	*Miscellaneous--managing "other" personnel*
17	*In charge of guidance counselors; guidance dept.; testing*
4	*Director of Athletics*
	INFORMATION GATHERING AND PROCESSING
45	*Attendance, tardiness; pupil accounting, statistics; reports to superintendent*
4	*"Paperwork"; college transcripts; prepare daily bulletins*
4	*Liaison with feeder schools; "public relations"*
16	*Class scheduling; teacher and student schedules; "master schedule"*
4	*Calendar work for year; exam scheduling; assigning changes of courses for students*
6	*In charge of bookkeeping, office records, automation*
6	*Requisitions, school supplies; inventory reports*

(CONTINUED ON FOLLOWING PAGE)

MAJOR ACTIVITIES AND RESPONSIBILITIES OF ASSISTANT PRINCIPALS, continued

	FINANCIAL MANAGEMENT
8	Budget allotments; "finances," business matters in general
	CURRICULUM AND INSTRUCTION
19	Curriculum, instruction in general; coordination, development; innovations
8	Textbooks
	HELP WITH ADMINISTRATION IN GENERAL
10	Acting for principal in his absence

SECOND QUESTIONNAIRE TO PRINCIPALS

YOUTH IN TRANSITION

1. We would like you to move rapidly through this questionnaire and not to spend a lot of time on any one question. Give your best estimates without worrying about absolute precision.
2. Please try to respond to all questions. Even if you're uncertain about the answer, we'd like to know what you think.
3. We welcome your comments or any questions.

THANK YOU IN ADVANCE FOR YOUR HELP

School Number_____
Part I

SURVEY RESEARCH CENTER / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN / ANN ARBOR, MICHIGAN

A. EVALUATION OF TEACHING PERFORMANCE

1. Roughly what percent of your high school teachers receive one or more formal evaluations in any one year by school officials?

14	1.	None
9	2.	1 - 10%
8	3.	11 - 20%
12	4.	21 - 30%
2	5.	31 - 40%
8	6.	41 - 60%
2	7.	61 - 80%
1	8.	81 - 99%
41	9.	100%
4		*MISSING DATA*

If no teachers receive a formal evaluation, please turn directly to page 4

2. Is this evaluation required of the school by some person or group external to your school (such as the central administration, an accrediting agency, etc.)?

20	1.	No
63	2.	Yes--What is the title of the person or group requiring it? ____________
17		*MISSING DATA* *(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)*

3. What teachers receive such evaluations (i.e. all teachers or some special types) and how often do they receive them?

(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE

4. Who observes the classroom performance of teachers who are being evaluated? (e.g., the principal, a faculty committee, department head, etc.)

(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)

5. How does the evaluating person or group gather relevant information? MARK ALL THAT APPLY.

% YES

83	1.	Classroom observation
9	2.	Changes in student scores on standard tests
9	3.	Student performance on S.A.T. or National Merit exams
23	4.	Conversations with other teachers
5	5.	Ratings by students
	6.	Other (please specify) ____________
17		*MISSING DATA*

6. If classroom observation of teacher performance is one of the ways in which information is gathered, which of the following is the primary form in which the observation is recorded? CHECK ONE.

29	1.	Evaluator's subjective opinion
23	2.	Checklist made up by administrators within school district
25	3.	Checklist made up by teachers or a combination of teachers and administrators
5	4.	Checklist designed by an outside authority (e.g., Medley and Mitzel's OSCAR or Stanford Teacher Competency Appraisal Guide)
1	5.	Systematic coding system (e.g., Flander's Interaction Analysis)
	6.	Classroom observation is not used
17		*MISSING DATA*

7. How would you rate the present evaluation system in terms of its ability to assure a fair evaluation of the teachers involved?

1	1.	Very poor
5	2.	Poor
33	3.	Fair
42	4.	Good
1	5.	Excellent
19		*MISSING DATA*

8. Roughly how many man-hours per year (on the average) would you estimate are spent on formal evaluation for each teacher who receives such an evaluation?

	MN	*MED*	*SD*	*MD*
a. hours per teacher on observation	4.9	3.0	5.4	27%
b. hours per teacher on write-up	1.9	1.0	2.0	26%
c. hours per teacher on feedback or conference with teacher	2.6	1.0	3.3	29%
d. hours per teacher on other (specify)				
e. hours per teacher--TOTAL TIME (Sum of a-d)	9.5	6.0	9.3	29%

9. Do you feel that the benefits of the present evaluation system justify its costs?

4	1.	Definitely not
6	2.	Probably not
41	3.	Probably so
30	4.	Definitely so
19		*MISSING DATA*

10. Do you offer tenure contracts in your school system?

67	1.	Yes
16	2.	No
17		*MISSING DATA*

11. What percentage of the teachers who are going through some "trial period" in your school (like the pre-tenure period) are refused a contract renewal sometime during that period?

MN=3.6% MED=2.0% SD=5.2% MD=25%

12. For what proportion of your high school teachers is their salary affected by their formal evaluation?

67	1.	0%
7	2.	1 - 25%
0	3.	26 - 50%
0	4.	51 - 75%
0	5.	76 - 99%
8	6.	100%
18		*MISSING DATA*

13. Please describe briefly any important decisions (other than salary or tenure) which are affected by the teacher evaluation process.

(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)

	1 LITTLE OR NONE	2 SOME	3 MODERATE	4 CONSIDERABLE	5 A GREAT DEAL	*MISSING DATA*
14. In your opinion, how much does the formal evaluation of teachers' performance help them to improve their teaching?.	0	15	41	24	1	20
15. How much does the formal teacher evaluation interfere with the ability of the evaluating person(s) to communicate with and give help to the teachers?	37	28	13	3	0	19
16. In your opinion how much does having a formal teacher evaluation help teachers to express problems and complaints which they might not otherwise express?.	7	16	30	27	1	19
17. How much does the evaluation help administrators to express problems and complaints to teachers, which they might not otherwise express?	8	17	23	32	1	19

B. ROLE OF THE CENTRAL ADMINISTRATION

1. We are interested in how much authority is delegated to the staff (including the principal) of individual schools by the central administration of school systems. Here are five ways in which a decision related to a school might be made:

   1. Almost completely by the central administration
   2. Mostly by the central administration with some "say" by the school personnel (include the principal under school personnel)
   3. Co-equally by the central administration and the school personnel
   4. Mostly by school personnel, with some "say" by the central administration
   5. Almost completely by school personnel

Now, for each decision given below, please indicate the number of the method listed above which most nearly describes the way in which the decision is usually made for your school (or the way you think it would be made):

	1	2	3	4	5	MD
a. Expelling a student	28	20	17	15	18	2
b. Deciding whether to hire a particular teacher	12	30	27	17	12	2
c. Deciding whether to dismiss a teacher from your school	10	27	29	23	9	2
d. Deciding whether to hire a particular counselor	14	25	25	23	9	3
e. Deciding whether to dismiss a counselor	12	24	30	22	7	5
f. Deciding whether to hire a particular administrator for your school	50	14	26	8	1	2
g. Deciding whether to dismiss an administrator in the school	54	13	20	5	0	7
h. Deciding to create new lines of authority in the school or change the way the faculty is organized	9	26	30	18	16	2
i. Determining what role assistant principals and other administrators shall play	7	25	20	22	23	3
j. Assigning courses to teachers	0	7	7	22	62	2
k. Deciding how non-salary funds for the school shall be allocated	32	23	15	14	15	2
l. Deciding what particular equipment to purchase	8	21	25	28	15	2
m. Determining whether extra funds should be allocated for more personnel or for more supplies and equipment	42	33	17	6	1	2
n. Determining whether funds for additional personnel will be spent for more teachers, more counselors, or more administrators	49	29	17	3	1	2
o. Deciding what textbooks shall be purchased with available funds	7	11	27	28	26	2
p. Deciding whether to add or drop a course	2	10	26	28	31	3
q. Deciding to make major revisions in the curriculum	6	18	44	22	9	2
r. Evaluating the adequacy of programs of study (college prep., etc.) offered by the school	1	14	32	30	20	3

C. BACKGROUND AND PRESENT ROLE

Check one box for each question below:	NEVER 1	SELDOM 2	SOMETIMES 3	OFTEN 4	ALWAYS 5	MISSING DATA
1. How often do you feel that you can't get to the really important things because of immediate demands?	0	9	37	51	0	4
2. How often do you feel that you have too heavy a work load, one that you can't possibly finish?	3	20	37	30	6	4
3. How often do you feel that the amount of work you have to do may interfere with how well it gets done?	0	12	52	30	3	4
4. How often do your routine administrative duties interfere with your effectively performing the more important aspects of your role?.	0	8	35	51	2	4

5. Counting this year, how long have you been the principal of this school?

MN=6.3 MED=3.0 SD=6.8 MIN=1 MAX=39

6. Counting this year, how long have you been a secondary school administrator?

MN=12.1 MED=10.0 SD=8.9 MIN=2 MAX=41

7. Prior to becoming an administrator, how many years of experience did you have

...as a teacher? *MN=9.6 MED=8.0 SD=7.4 MIN=0 MAX=34*

...as a counselor? *MN=0.7 MED=0.0 SD=2.0 MIN=0 MAX=15*

8. What is the highest level of education you have attained? (CHECK ONE)

0	(1) High school
0	(2) Some college
0	(3) Bachelor's degree
3	(4) Bachelor's degree plus some credit
12	(5) Master's degree
77	(6) Master's degree plus some credit
8	(7) Doctor's degree

9. Roughly, how many hours do you spend in an average week during the school year on work at school and on work-related activities done elsewhere?

MN=55.1 MED=55.0 SD=8.1 MIN=40 MAX=90 MD=9%

For each of the activities listed below, we would like you to make two ratings:

(A) On the average, how many hours per week would you estimate you spend on the activity during the school year?

(B) Do you think, ideally, that this is too much, too little, or about the right amount of your time to be spent on the activity?

		THIS IS: FAR TOO LITTLE 1	TOO LITTLE 2	ENOUGH 3	TOO MUCH 4	FAR TOO MUCH 5	MISSING DATA
10.	Teaching classes (include preparation, etc.) (hours/week) *MN=1.3 MED=0.0 SD=4.3 MD=6%*	5	4	33	3	0	55
11.	Formal counseling of students (hours/week) *MN=5.1 MED=5.0 SD=4.7 MD=10%*	6	31	40	0	2	22
12.	Handling discipline problems (hours/week) *MN=6.8 MED=5.0 SD=5.6 MD=11%*	0	4	54	21	7	14
13.	All time spent evaluating the effectiveness of the school (or school programs, departments, or other units) and planning changes in same. Exclude time spent on the evaluation of individual teachers. (hours/week) *MN=14.7 MED=10.0 SD=10.8 MD=18%*	11	42	23	1	3	21

14. What will be the total annual salary that you receive from this school system this year? (PLEASE ROUND TO THE NEAREST $1000.)

MN=$14,015 MED=$14,000 SD=$3,977 MIN=$6,000 MAX=$26,000

15. For how many months of work (excluding vacations) do you receive that salary?

MN=11.2 MED=11.0 SD=0.8

16. What would you say are the two most important problems you currently face as principal of your high school?

(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)

TITLE OF PERSON OR GROUP EXTERNAL TO SCHOOL REQUIRING EVALUATION

2. Is this evaluation required of the school by some person or group external to your school (such as the central administration, an accrediting agency, etc.)?

   1. No
   2. Yes--What is the title of the person or group requiring it? ______

51	*1. School Board and Superintendent's Office; Central Office Supervisor*
6	*2. State Department of Education; Director of Personnel*
3	*3. Accrediting Agency (eg., North Central Association)*
0	*4. Contract with teachers' union*
41	*MISSING DATA*

TEACHERS RECEIVING EVALUATION AND HOW OFTEN

3. What teachers receive such evaluations (i.e. all teachers or some special types) and how often do they receive them?

	FREQUENCY								
WHICH TEACHERS	*Once every two years or more*	*Once a year*	*Twice a year*	*Three times a year*	*Four times a year or more*	*Not specified; all during the year; as time allows, etc.*	*Receive evaluation; no mention of how often*	*No evaluation in the school*	*MISSING DATA*
All teachers	2	11	3	4	0	2	16	14	49
All non-tenure; probationary	0	2	4	7	3	0	6	14	63
All tenured teachers	2	10	1	0	0	2	1	14	70
New; less than (x) years experience--not specified non-tenure	2	2	5	1	1	1	13	14	60

WHO OBSERVES TEACHERS WHO ARE BEING EVALUATED

4. Who observes the classroom performance of teachers who are being evaluated? (e.g., the principal, a faculty committee, department head, etc.)

	% MENTIONED		
	1st	*2nd*	*Total*
1. Principal	81	0	81
2. Assistant Principal	0	33	33
3. Department Heads	2	10	12
4. Counselors; Director of Guidance	0	2	2
5. Teachers	0	0	0
6. Tenure Committee	0	0	0
7. Superintendent; Assistant Superintendent; System Supervisor	0	8	8
8. No evaluation in the school			14
MISSING DATA	3	32	

DECISIONS OTHER THAN TENURE/SALARY AFFECTED BY EVALUATION

13. Please describe briefly any important decisions (other than salary or tenure) which are affected by the teacher evaluation process.

		% MENTIONED		
		1st	*2nd*	*Total*
1.	*Rehiring (of non-tenured teachers; contract renewal)*	5	0	5
2.	*Transfer to another school in the system*	0	0	0
3.	*Change in teaching assignment (including change in grade, track, subject taught); course assignments*	16	5	21
4.	*Assignment to team teaching; student activity sponsorships; school or district committees; extra work*	3	1	4
5.	*Promotion; assignment to administrative jobs*	5	0	5
6.	*Necessity of additional assistance to teachers; of teacher taking courses in weak areas*	5	0	5
7.	*Other*	8	3	11
8.	*No evaluation in the school*			14
	MISSING DATA	43	76	

PROBLEMS FACING PRINCIPAL

16. What would you say are the two most important problems you currently face as principal of your high school?

PERCENT MENTIONING EACH OF THE FOLLOWING PROBLEMS (SUM OF TWO MENTIONS):

	HANDLING OWN ROLE
6	*Role overload of principal; too many areas to supervise; spread too thin*
12	*Lack of time to do an effective job; to exert leadership; for personal involvement; to improve school; to follow through on things*
2	*Keeping up with large amount of clerical and paper work*
	BUILDING/MAINTAINING EFFECTIVE LEADERSHIP
2	*Communication; human relations in general; becoming adequately aware of what is really going on*
2	*Lack of administrative assistants; need for more administrative help*
4	*Communication between administration and staff; trying to unify the faculty; keeping them happy; high morale*
11	*Evaluation and coordination of the total school program; determining objectives; interpreting planning, implementing necessary changes (establishing climate for change)*
1	*Establish climate of academic excellence; improve the school to attract more effective students*
2	*Instructional leadership; lack of leadership (and/or consultative help) as program change calls for more sophistication in terms of assessment, change strategy, and leadership with specific departments*
29	*Evaluating, improving, providing curriculum to meet current needs, to meet talents of all our students; applying new educational concepts; updating course content (including mention of specific areas)*
6	*Innovation in, improvement of instruction, teaching methodology, techniques*
5	*Supervision of instruction*
	TEACHERS' AND COUNSELORS' QUALIFICATIONS AND BEHAVIOR
2	*Personnel in general; building a better qualified staff*
13	*Lack of competent teachers; problems in hiring qualified teachers (including high turnover of staff)*
4	*Militancy of teachers; teacher demands*
2	*Upgrading the guidance department; developing a guidance program for the assessment and counseling and follow-up for all the students in the school*

(CONTINUED ON FOLLOWING PAGE)

PROBLEMS FACING PRINCIPAL (continued)

STUDENT BEHAVIOR AND MOTIVATION

10 Student problems in general; current unrest, militancy; social problems as related to today's youth; communication, bridging the generation gap

6 Student discipline; maintaining rules and regulations in the school (including attendance)

9 Student motivation; getting them to take advantage of opportunities offered in school, to work to their potential; to develop conscientious attitudes towards education; appreciation for physical facilities

3 Drop-outs; getting students to stay in school

1 Building a good self-image of students, especially minority groups

5 Racial and social unrest; militancy of black students

HANDLING SCHOOL INTEGRATION

2 Integration and social problems inherent in it

2 The need for adjustment of curriculum and activities to fit needs of increased integration; orienting teachers to this need

1 Loss of enrollment; fewer staff members due to integration

1 Keeping student body current to new situations brought on by integration

DEALING WITH CENTRAL ADMINISTRATION

2 Lack of effective communication with superintendent and school board; involvement by the central administration in matters that are within the province of the building principal

MONEY AND FACILITIES

5 Finances; lack of money as related to cost of personnel, equipment

10 Overcrowded facilities; need for classrooms; increased enrollment; inadequate equipment

DEALING WITH PARENTS AND COMMUNITY

6 Parents; lack of parental cooperation; getting them to understand that we cannot meet each student's individual problem

3 School-community relations, communication; need to improve, establish public relations program; community reactions to innovative programs; problems from adult pressure groups

1 Community control

3 MISCELLANEOUS

27 MISSING DATA

SECOND QUESTIONNAIRE TO PRINCIPALS (CONTINUED)

SURVEY RESEARCH CENTER
UNIVERSITY OF MICHIGAN

YOUTH IN TRANSITION

1. Please answer all questions, if possible.
2. When percentages are called for and you do not have percentages readily available, please include the absolute numbers. For example, if you have 1235 students in your school and 270 students are in the 12th grade, an appropriate answer to the question "What percentage of your students are in the 12th grade?" would be either 22% or 270/1235. (It is essential that the figure 1235 be included so that we can calculate the percentage.)
3. If you are unsure of a number or percentage which is asked for, we would appreciate your best estimate.

School Number_____

SURVEY RESEARCH CENTER / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN / ANN ARBOR, MICHIGAN

D. GENERAL INFORMATION ABOUT STUDENTS

1. About what percentage of your high school students are on half-day sessions or double shifts because of overcrowding? (Do not include students in work-study programs.)

   MN=3.7% MED=0.0% SD=17.4%

2. Roughly what percent of your high school students are:

   1. Male *MN=51.1% MED=50.0% SD=7.8% MD=0%*

   2. Female *MN=48.7% MED=50.0% SD=8.3% MD=1%*

3. Roughly what percent of your high school students would you estimate live within a mile of the school?

   MN=36.7% MED=40.0% SD=24.6% MD=5%

4. How many of your high school students are prevented from participating in many extracurricular activities because of time when school buses leave?

33	1. None
42	2. A few
23	3. Some
2	4. Most
0	5. All
1	*MISSING DATA*

5. Roughly what percentage of your students who were at the end of 10th or 11th grade last Spring were not promoted to the next higher grade last Fall because of poor grades?

   MN=5.0% MED=3.0% SD=5.4% MD=2%

E. STUDENT GOVERNMENT

1. Is there a student government at your school?

94 1. Yes

6 2. No (Please skip to question 4)

1 *MISSING DATA*

2. Are elections held in your school for student government offices?

92 1. Yes

1 2. No (Please skip to question 4)

8 *MISSING DATA*

3. What proportion of the students usually vote in these elections?

60 1. Virtually all

22 2. Most

10 3. About half

0 4. Less than half

8 *MISSING DATA*

4. Are there any student-faculty or student-administration committees?

53 1. No

45 2. Yes--What is the title of these committees (or what do they do)?

2 *MISSING DATA*

____

____

(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)

5. How many times during the last year ('67-'68) have student opinions on some issue been sought by the faculty or administration through a questionnaire?

MN=1.4 MED=1.0 SD=1.6 MD=6%

F. CURRICULUM AND PROGRAMS

1. On the average, what is the total amount of time a high school student spends in class periods per day (include study halls, etc., but exclude lunch time.)

(hours/day) *MN=5.9 MED=6.0 SD=0.7 MIN=3 MAX=7 MD=3%*

2. About how many different courses does your school offer in grades 10, 11, and 12 combined?

MN=79.3 MED=71.0 SD=50.4 MIN=2 MAX=280 MD=11%

3. How many courses were added to this list, deleted from it, and/or substantially revised since this time last year?

courses added *MN=3.3 MED=2.0 SD=3.7 MD=4%*

courses deleted *MN=2.1 MED=0.0 SD=10.6 MD=4%*

courses revised *MN=3.1 MED=1.0 SD=9.7 MD=6%*

4. Does your school have "ability grouping" in the instructional classes in grades 10-12 (i.e., classes in which the same basic material is covered by the various ability levels but at accelerated and/or decelerated rates)?

17 1. No
53 2. Yes, for some courses
14 3. Yes, for about half of our courses
10 4. Yes, for most courses
2 5. Yes, for all courses
4 *MISSING DATA*

5. Are any course or program offerings of the school ever influenced by the needs of local businesses and other employers?

30 1. No
69 2. Yes--please describe briefly: ____________
(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)
1 *MISSING DATA*

6. Is there any advisory committee for the school or other formal contact with local businessmen?

51 1. No
48 2. Yes--please describe briefly: ____________
(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)
1 *MISSING DATA*

7. If your school has undertaken any special activities or programs to improve race relations in the school or community, we would appreciate your giving a brief description of them.

(RESPONSE DISTRIBUTION AT END OF QUESTIONNAIRE)

69 No such programs have been undertaken to date

G. TEACHER ORGANIZATIONS

1. In your state, are school districts obliged (by law) to negotiate with teachers on matters relating to their salaries and/or contracts?

36	1.	Yes (skip to question #3)
64	2.	No
1		*MISSING DATA*

2. If not, does your school district negotiate these matters with teachers anyway?

37	1.	Yes
22	2.	No
40		*MISSING DATA*

3. Roughly what percent of the teachers in your high school are in each of the following teacher organizations?

N.E.A. and/or its state or local affiliates	*MN=79.2% MED=94.0% SD=25.7% MD=7%*
American Federation of Teachers and/or its state or local affiliates	*MN=9.6% MED=0.0% SD=24.0% MD=4%*
Other: please specify_______________	*MN=0.0% MED=0.0% SD=0.0% MD=2%*

4. Which, if any, of these organizations represent the teachers in contract negotiations?

52	1.	N.E.A. and/or its state or local affiliates
9	2.	American Federation of Teachers and/or its affiliates
0	3.	Other organization: please specify _______________
31	4.	No organization (skip to question #6)
5	*5.*	*Local teacher group or committee*
3	*6.*	*Combined NEA-AFT*

5. How long has this organization been the bargaining agent for teachers in your school (including this school year)?

(years) *MN=5.5 MED=3.0 SD=6.5 MD=45%*

6. Has there ever been a strike in your district resulting from failure to agree on negotiated matters?

87	1.	No (skip questions #7 and #8)
12	2.	Yes
2		*MISSING DATA*

7. How many days (if any) have your teachers been out on strike during this school year and during the previous school year?

school days this school year	*MN=6.3 MED=1.0 SD=6.7 MD=87%*
school days the previous school year	*MN=0.2 MED=0.0 SD=0.6 MD=90%*

8. Have mediators or arbitrators (either formal or informal) ever been used in the negotiations?

5	1.	Yes
7	2.	No
88		*MISSING DATA*

H. ADMINISTRATIVE FUNCTIONS AND PRACTICES

Consider the following list of activities. For each one, check "YES" if there is at least one person in your school system (other than the superintendent or principal) who is responsible for the activity as a major and explicit part of his role. Check "NO" if there is no such person.

A major and explicit part of someone's role (other than the superintendent or principal)?

YES	NO	MD	
56	43	2	1. Scanning the professional literature, conferences, etc. for new educational practices which might be of value
63	36	2	2. Conducting research in the system (or school) for the purpose of evaluating new efforts and improving the schools
65	34	2	3. Providing assistance to individual teachers who request help in improving their teaching (do not count administrators who in any way influence the evaluation given teachers)
53	46	2	4. Running programs for the ongoing development of teachers' skills
47	51	2	5. Running programs for the ongoing development of counselors' skills
36	61	3	6. Running programs for the ongoing development of administrators' skills
55	44	2	7. Recruiting teachers and counselors
59	39	2	8. Maintaining community relations
70	29	2	9. Scanning Federal and State funding legislation for funding possibilities for the school system or the school

Please indicate which of the following practices are followed frequently or regularly in your school system (or your school) by checking the "YES" box. Otherwise, please check "NO".

YES	NO	MD	
56	43	2	10. Providing released time to teachers for in-service education
70	29	2	11. Providing "outside" consultants for in-service education
74	23	3	12. Providing "inside" specialists for in-service education
58	40	3	13. Providing released time to teachers for planning and evaluation of courses, departments, programs, etc.
45	52	3	14. Providing available research specialists to assist the school in trying out and evaluating new programs

Please indicate which (if any) of the following changes have been made in your school since this time two years ago by checking "YES". Otherwise, please check "NO".

YES	NO	MD	
64	33	3	15. A new type of role which did not previously exist in the school has been created and filled (e.g., a new assistant principalship, a coordinator role, etc.)
37	60	3	16. A major change has been made in the way teachers divide teaching assignments or coordinate their work (e.g., a new team teaching arrangement, new departmental organization, etc.)
25	71	3	17. A major change has been made in the way students are grouped into programs or classes (e.g., a new tracking system, creation of new study programs, etc.)
32	63	5	18. A major change has been made in the structure for communication between students and teachers or administrators (e.g., new student-faculty committees, new forms of student-faculty contact, questionnaires, etc.)
42	55	3	19. A major change has been made in the way administrators in the school divide administrative assignments or coordinate their work (e.g., major tasks -- like handling discipline -- have been reassigned or divided differently, etc.)
26	70	4	20. A new program for improving teachers' skills has been created in the school

21. How many times during the last year ('67-'68) have faculty opinions on some issue been sought by the administration through a questionnaire?

MN=1.9 MED=2.0 SD=1.9 MD=13%

22. In general, how would you rate the pay scale offered to teachers in your school in comparison to the pay scales in surrounding communities in your area?

1	Far below average
18	Below average
54	About average
27	Above average
1	Far above average

23. To your knowledge, how many times during the last two school years have a substantial number of your faculty members been asked to fill out questionnaires for research?

MN=2.9 MED=2.0 SD=3.2 MAX=25 MD=21%

I. GENERAL INFORMATION ABOUT FACULTY AND STAFF

1. What percent of your full-time teachers who teach high school students are.

   1. Male   MN=55.5% MED=58.0% SD=14.5% MAX=90% MD=0%

   2. Female   MN=44.4% MED=42.0% SD=14.5% MAX=80% MD=1%

2. We are interested in the total amount of manpower devoted to administrative functions in your school (as opposed to teaching, counseling, clerical, secretarial, etc.). We would assume, for instance, that most of a principal's time would count as administrative (except for when he teaches, counsels, etc.). Similarly for assistant principals, coordinators, etc. If department heads have released time for administration, that would count also. Please give your best estimate (in full-time equivalents) of the total amount of manpower devoted to administrative functions in your school. (For example, two full-time administrators plus one person with a half-time administrative assignment would make 2.5 full-time equivalents.) Include the principal and any time central administrators spend at the school.

   (full-time equivalents)   MN=37.0 MED=30.0 SD=30.6

3. Please estimate the number of people (in full-time equivalents) of each of the following types which you have in your school. (Please separate paid employees from volunteers.)

	PAID ADULTS			VOLUNTEER ADULTS			STUDENTS		
	MN	MED	SD	MN	MED	SD	MN	MED	SD
secretaries and clerks	49.9	40.0	36.6	0.3	0.0	1.8	18.4	10.0	32.7
teaching assistants, readers, etc.	9.1	0.0	20.2	0.4	0.0	34.3	7.8	0.0	28.9
monitors for halls, cafeterias, etc. (non-teachers)	7.1	0.0	23.3	0.4	0.0	5.2	11.6	0.0	33.3

4. We would like to get some information about teacher salaries in your school. if you have an extra copy of your pay schedule which you could enclose with this questionnaire, that would be fine. If not, could you please indicate the average annual salary in your school for teachers having each of the following qualifications? (ROUND TO THE NEAREST $100.)

	MN	MED	SD	MD
B.A. degree and 0 years experience	$5,768	$5,800	$ 539	9%
B.A. degree and 5 years experience	$6,935	$7,100	$ 934	9%
B.A. degree and 10 years experience	$8,068	$8,200	$1,433	9%
M.A. degree and 0 years experience	$6,438	$6,400	$ 843	9%
M.A. degree and 5 years experience	$7,663	$7,700	$1,195	9%
M.A. degree and 10 years experience	$8,958	$9,000	$1,744	9%

STUDENT-FACULTY/STUDENT-ADMINISTRATION COMMITTEES

4. Are there any student-faculty or student-administration committees?

    1. No
    2. Yes--What is the title of these committees (or what do they do)?

PERCENT HAVING NO COMMITTEES: 53%

PERCENT HAVING NO STANDING COMMITTEES, BUT MEET AS NEEDS ARISE: 2%

PERCENT HAVING COMMITTEES, BUT NOT LISTING THEM:. 4%

PERCENT MENTIONING EACH OF THE FOLLOWING COMMITTEES (BASED ON FOUR MENTIONS):

3	*Hearing student grievances*
1	*Judging discipline cases*
3	*Review of school policies, regulations*
3	*Biracial; deal with integration problems*
3	*Curriculum; use of unstructured time*
21	*Extracurricular student activities; clubs; publicity*
1	*(including homecoming, graduation, awards, assemblies, etc.)*
3	*Care of building; showcases, bulletin boards*
2	*Student welfare; safety; orientation; student finance*
1	*Social welfare; service society*
3	*Foreign student committee*
6	*Grade councils; class committees*
2	*Student Advisory Committee; discuss school problems in general*
5	*Faculty advisors; faculty planning committee*
1	*Through principal's cabinet, advisory committee*
1	*Self-study*
0	*Inter-school council*
2	*PTA coordinators; PTSA*

INFLUENCE OF COURSE AND PROGRAM OFFERINGS BY LOCAL BUSINESS

5. Are any course or program offerings of the school ever influenced by the needs of local businesses or other employers?

    1. No

    2. Yes--please describe briefly:

PERCENT INDICATING THAT BUSINESS HAS NO INFLUENCE ON PROGRAM OFFERINGS: 30%

PERCENT INDICATING THAT BUSINESS HAS AN INFLUENCE ON PROGRAM OFFERINGS, BUT NOT DESCRIBING IT: 6%

PERCENT MENTIONING EACH OF THE FOLLOWING PROGRAM OFFERINGS THAT ARE INFLUENCED BY LOCAL BUSINESS:

16	*Distributive Education: COOP*
5	*Diversified Occupations*
17	*Business Education*
12	*Pre-vocational and/or vocational courses; Industrial Arts (eg, auto shop, cosmetology, drafting, construction, culinary arts)*
6	*Agriculture*
1	*Teachers work with personnel departments of industries*
3	*Courses added; courses and programs revised to meet local need*
2	*Other, miscellaneous*

ADVISORY COMMITTEE OR OTHER FORMAL CONTACT WITH LOCAL BUSINESS

6. Is there any advisory committee for the school or other formal contact with local businessmen?

1. No

2. Yes--please describe briefly:

PERCENT INDICATING THAT THE SCHOOL HAS NO FORMAL CONTACT WITH LOCAL BUSINESS: 51%

PERCENT INDICATING THAT THE SCHOOL HAS FORMAL CONTACT WITH LOCAL BUSINESS, BUT NOT DESCRIBING IT: 3%

PERCENT MENTIONING EACH OF THE FOLLOWING KINDS OF FORMAL CONTACTS BETWEEN THE SCHOOL AND LOCAL BUSINESS:

1	*Dad's Club; PTA*
15	*Business or layman's advisory group for vocational or pre-vocational programs*
8	*Business or layman's advisory group for distributive education*
9	*Business or layman's advisory group for cooperative education or work-study*
4	*School-business-union people meet*
4	*Principal's advisory group includes business people; "community advisory"*
3	*County-wide curriculum study with citizens advisory committee*
1	*Committee of Engineers*
2	*Other, miscellaneous*

ACTIVITIES, PROGRAMS TO IMPROVE RACE RELATIONS

7. If your school has undertaken any special activities or programs to improve race relations in the school or community, we would appreciate your giving a brief description of them.

PERCENT INDICATING THAT NO PROGRAMS HAVE BEEN UNDERTAKEN TO DATE: 69%

PERCENT INDICATING THAT PROGRAMS HAVE BEEN UNDERTAKEN, BUT NOT DESCRIBING THEM: 4%

PERCENT MENTIONING EACH OF THE FOLLOWING PROGRAMS UNDERTAKEN TO IMPROVE RACE RELATIONS (BASED ON TWO MENTIONS):

	CURRICULUM REVISIONS
4	*Formation of; updating classes in history and culture of minorities*
5	*Incorporating history and culture of minorities into existing American History classes, social studies program; historical chronologies of minorities*
1	*Special emphasis on social relations classes*
1	*Textbook committee for use of integrated textbooks*
	ORGANIZATIONAL REVISIONS
4	*Formation of Human Relations Club; clubs to discuss minority group problems*
4	*Clubs, programs (non-class) related to minority history and culture (eg, Negro History Club)*
1	*Bussing of students*
1	*Principal has integrated the faculty*
1	*Action committee to discuss school problems*
1	*Other organizational revisions*
	SPECIAL ACTIVITIES
4	*Intercultural exchange program; teacher and student exchanges with inner-city schools*
5	*In cooperation with community: Brotherhood Week, housing program; community interracial organizations; American Field Service Program*
3	*Participation in Human Relations workshop; workshop for discussion of minority group problems*
0	*Informal meetings between administrators and minority groups*
1	*Reading groups; Books for Brotherhood reading list*
3	*Other special activities*
	OTHER
2	*Encourage participation in school clubs and activities for all; for minority groups*
2	*Concentrated effort to find jobs; OEO; vocational programs, college help program*

QUESTIONNAIRE TO HEADS OF COUNSELING

YOUTH IN TRANSITION

COUNSELING PROGRAM QUESTIONNAIRE

1. We would like you to move rapidly through this questionnaire and not to spend a lot of time on any one question. Give your best estimates without worrying about absolute precision.
2. Please try to respond to all questions. Even if you're uncertain about the answer, we'd like to know what you think.
3. The numbers to the far right of the answer boxes are for our use in processing your answers and may be ignored in filling out the questionnaire.
4. Please write your name and title in the space below.

THANK YOU IN ADVANCE FOR YOUR HELP

School Number

Completed by:

Name______________________

Title______________________

SURVEY RESEARCH CENTER / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN / ANN ARBOR, MICHIGAN 48106

1. How many full-time counselors are there in your school (that is, counselors who spend full-time in guidance and counseling-related activities in your school only)?

   MN=31.9 MED=30.0 SD=25.4 MD=2%

2. How many full-time equivalent counselors would you estimate are represented by all people who are engaged in guidance and counseling activities part-time in your school? (For example, if five teachers each spend one-third of their time as counselors, they would represent 1 2/3 full-time equivalent counselors.)

   (full-time equivalent counselors based on part-time counselors only) *MN=7.1 MED=0.0 SD=17.0 MD=2%*

3. The first two questions should together give the total number of "full-time equivalent counselors" in your school. If your school contains more than grades 10 through 12, how much counseling time (in full-time equivalent counselors) would you estimate is devoted to students in grades 10-12 only?

   33% School contains grades 10-12 only

   (full-time equivalent counselors for students in grades 10-12) *MN=32.2 MED=30.0 SD=25.7 MD=2%*

4. How many teachers in your school participate in a program of counseling students in their course selection? Please do not include teachers whom you counted as "part-time counselors" in question 2 above.

43	(1) None
32	(2) Some
2	(3) About half
18	(4) Most
3	(5) All
2	*MISSING DATA*

5. How much clerical assistance (secretarial, filing, etc.) does the counseling program have? This should include both part-time and full-time workers, combined to give the total number of full-time equivalents; do not include time contributed by counselors.

   (full-time equivalent clerical workers) *MN=10.7 MED=10.0 SD=9.8 MD=2%*

6. What facilities for referral are available in your school and community?

CHECK ALL BOXES THAT APPLY

Also, estimate the proportion of boys in grades 10-12 at your school referred to personnel in each category.

	AVAILABLE IN OUR SCHOOL OR SCHOOL SYSTEM 1	AVAILABLE IN THE COMMUNITY 2	NOT AVAILABLE IN SCHOOL SYSTEM OR COMMUNITY 3	*MISSING DATA*	% 10-12 GRADE BOYS REFERRED			
					MN	*MED*	*SD*	*MD*
a. Psychiatrist	19	50	28	6	9.1%	3.0%	14.1%	32%
b. Psychologist (Ph.D.)	34	35	30	4	14.5%	5.0%	27.3%	30%
c. Psychometrician or Diagnostician	43	33	26	6	20.2%	5.0%	29.9%	34%
d. Rehabilitation counseling services	23	59	16	6	20.2%	10.0%	29.4%	30%
e. Social worker or "visiting teacher"	43	24	35	4	30.9%	10.0%	61.9%	30%
f. Mental health clinic	9	58	28	7	14.2%	5.0%	27.4%	31%

7. Consider for a moment the total amount of staff time devoted to your school's guidance program for 10-12 grade students, as described in questions 1-6. About what proportion of this total time would you estimate (roughly) is used in each of the following broad areas of activity? Include not only time spent directly with the students, but also preparation time, test administration and scoring, writing recommendations, talking to teachers and parents, etc.

	MN	*MED*	*SD*	*MD*
a. Career decisions	17.5%	15.0%	9.8%	9%
b. College selection, application, scholarships	26.0%	22.0%	13.7%	9%
c. Helping students find jobs	6.3%	5.0%	5.1%	9%
d. Personal adjustment, family problems, etc.	19.0%	15.0%	12.6%	9%
e. Course selection	24.1%	20.0%	13.6%	9%
f. Other; please specify ____________	7.1%	0.0%	10.8%	8%
	100 %			

8. Is there task specialization among guidance counselors in your school (for example, does one counselor primarily counsel boys or primarily give college guidance or counsel only students in a particular program of studies)?

19	(1)	There is only one counselor in our school
40	(2)	No, there is not any task specialization
37	(3)	Yes, there is task specialization. Please describe briefly: ______
3		*MISSING DATA*

9. In general, does a boy have the same counselor all the way through grades 10 to 12?

70	(1)	Yes
24	(2)	No
5		*MISSING DATA*

10. How would you rate the adequacy of the facilities for guidance which are available to counselors in your school?

	UNAVAILABLE OR TOTALLY INADEQUATE 1	INADEQUATE 2	FAIRLY ADEQUATE 3	FULLY ADEQUATE 4	*MISSING DATA*
a. Privacy for counseling	8	13	38	39	3
b. Space for group counseling	21	45	22	9	3
c. A collection of appropriate testing materials	1	10	54	31	4
d. Budget for guidance services (excluding counselor salaries)	5	26	51	13	4
e. Clerical assistance	20	35	20	22	3
f. Computer facilities for data storage and analysis	57	16	18	6	4

11. How much say or influence do members of the counseling staff have in determining how the non-salary part of the counseling program budget should be spent?

6	(1)	No influence
23	(2)	Some influence
11	(3)	A moderate amount of influence
33	(4)	A considerable amount of influence
19	(5)	A great deal of influence
8		*MISSING DATA*

12. For each of the following types of tests, indicate: (a) the approximate proportion of 10-12 grade boys who are given this type of test; and (b) the approximate proportion of the boys taking this type of test who are talked to individually about the significance of the tests in relation to their future plans, etc.

	(a)				(b)			
	MN	*MED*	*SD*	*MD*	*MN*	*MED*	*SD*	*MD*
a. Individual intelligence test(s)........	33.9	5.0	44.1	7%	59.2	96.0	45.1	10%
b. Interest test(s) (e.g., Strong, Kuder)..	39.7	20.0	40.5	7%	68.8	98.0	42.5	12%
c. Achievement test(s)....	76.0	98.0	36.4	9%	69.8	98.0	37.5	8%
d. Personality test(s)....	4.4	0.0	15.5	6%	21.3	0.0	39.7	9%
e. General aptitude test(s) (e.g., DAT)....	39.7	15.0	43.3	9%	55.3	85.0	46.7	9%
f. Psychomotor aptitude test(s)................	2.0	0.0	6.7	5%	16.8	0.0	37.1	8%
g. Other ________________	2.7	0.0	15.3	4%	3.3	0.0	17.0	4%

13. Which of the following methods are used to present information to students about careers and occupations? Check all methods that are used to a significant extent in your school.

% YES		
72	(1)	Talks by persons now pursuing a particular career
92	(2)	Occupational information library
47	(3)	Group counseling sessions
26	(4)	Extensive class discussions
90	(5)	Individual conferences
50	(6)	Career days (nights)
3		*MISSING DATA*

14. Are any courses offered to boys in your school in the area of occupational information or occupational decision making?

73	(1)	No (SKIP TO NEXT QUESTION)
25	(2)	Yes; could you list all such courses offered; please indicate who is able to take such a course, who is required to do so, and how many hours a week it meets; and describe the course content briefly:________________
3		*MISSING DATA*

____

____

____

____

(please complete on back of this page if necessary)

15. Which of the following methods are used to present information to students about post-high school educational and training opportunities? Check all methods that are used to a significant extent in your school.

% YES		
68	(1)	Talks by school personnel
91	(2)	Talks by representatives of colleges, trade schools, etc.
81	(3)	Films and audio-visual means; bulletin board displays
46	(4)	Group counseling sessions
20	(5)	Extensive class discussions
93	(6)	Individual conferences
3		*MISSING DATA*

16. Which of the following methods are used to present information to students about particular colleges and trade schools, scholarships, loans, and how to apply for these? Check all methods that are used to a significant extent in your school.

% YES		
45	(1)	Tours of local colleges, etc.
57	(2)	Discussions with graduates now at, or alumni of, a particular college
96	(3)	Collection of catalogues for student use
56	(4)	Group counseling sessions
18	(5)	Extensive class discussions
94	(6)	Individual conferences
3		*MISSING DATA*

17. Which of the following methods are used to present information to students about specific job opportunities available to them following graduation? Check all methods that are used to a significant extent in your school.

% YES		
46	(1)	Tours of local industries
27	(2)	Discussions with former students now employed by local firms
68	(3)	List of job openings, on a bulletin board or in some other manner available for student consultation
39	(4)	Group counseling sessions
17	(5)	Extensive class discussions
89	(6)	Individual conferences
3		*MISSING DATA*

18a. Is there a placement program in the school designed to find jobs for boys who graduate from your school?

76	(1)	No (SKIP TO QUESTION 19)
22	(2)	Yes
3		*MISSING DATA*

18b. About what proportion of the boys in your school use the program to seek employment?

MN=3.6% MED=0.0% SD=8.7% MD=4%

18c. About what proportion of those boys who use this placement program are placed by the school?

MN=6.7% MED=0.0% SD=19.4% MD=4.5%

19. What proportion of the boys in your school make use of the following types of job-placement activities? (Write "0" if activity does not exist in your school.)

17.1%	3.0%	27.3%	9%	Receive information about jobs from representatives of local businesses who are invited to speak to groups of students, or by tours of local businesses given to boys interested in employment possibilities
7.4%	4.0%	13.8%	8%	Have employment interviews arranged by school personnel, either in the school or at the business's office
14.3%	5.0%	21.8%	9%	Have appointments scheduled with the State Employment Agency (or other similary agency) by school personnel
2.5%	0.0%	10.2%	6%	Use some other type of placement program; please describe briefly:____________

20. How many colleges and universities would you estimate have sent or will send respresentatives to talk to boys at your school during this school year?

MN=31.3 MED=24.0 SD=26.2 MD=4%

21. About how many colleges and universities have been visited at least once by representatives (counselors, principal, etc.) from your school during the last two years?

MN=13.6 MED=9.0 SD=18.2 MD=3.4

22. When a qualified boy in your school is applying to a college and there are alumni in your area from that college, how often are these alumni asked by the school to provide recommendations for the applicant?

11	(1)	Never
36	(2)	Seldom
31	(3)	Sometimes
18	(4)	Often
2	(5)	Always
3		*MISSING DATA*

23. Is there a follow-up program on boys who have graduated from (or dropped out of) your school, whereby you determine their success in their further education or in finding and holding jobs?

55	(1)	No
42	(2)	Yes; please describe briefly the nature and extent of this program____________
3		*MISSING DATA*

24. Are there specialized high schools available in the area served by your school to boys who choose a particular program of studies?

53 (1) No
44 (2) Yes; please check which of the following programs are handled at these schools:

% YES
  12 (1) College preparatory
  13 (2) Commercial and/or distributive
  44 (3) Vocational, Industrial, and/or Trade
  10 (4) Agricultural
  2 (5) Other:____________________
  0 (6) Other:____________________
  3 *MISSING DATA*

25. Are there any requirements for admission to your high school (other than place of residence)?

92 (1) No
6 (2) Yes; please specify____________________
2 *MISSING DATA*

26. Are there any school or school system requirements for entering the college preparatory program (such as a certain grade point average or teacher recommendations)?

82 (1) No
15 (2) Yes; please specify____________________
3 *MISSING DATA*

27. What proportion of all students who eventually enter the college preparatory program enter during each of the following time periods?

MN	*MED*	*SD*	*MD*	
20.5%	0.0%	34.6%	18%	Before 9th grade
53.7%	70.0%	36.4%	17%	Beginning or during 9th grade
15.7%	8.0%	24.5%	18%	Beginning or during 10th grade
7.5%	3.0%	13.8%	18%	Beginning or during 11th grade
2.2%	0.0%	3.4%	18%	Beginning or during 12th grade

28. About what proportion of students who are in the college preparatory program (at any time) transfer into another program of studies during their high school years?

MN=16.5% MED=13.0% SD=13.7% MD=14%

29. What proportion of all the students graduating from your high school in each of the following programs of study enter a college or university? (Give rough estimates if you do not have exact fitures available.)

MN	*MED*	*SD*	*MD*	
67.2%	*80.0%*	*25.1%*	*14%*	proportion of students graduating in the college preparatory program
21.0%	*15.0%*	*18.8%*	*18%*	proportion of students graduating in the general program
8.3%	*5.0%*	*11.4%*	*26%*	proportion of students graduating in the vocational (or industrial or trade) program

30a. Once a boy has entered a program of studies, does any school official ever systematically initiate a review of the appropriateness of his choice?

26 (1) No (SKIP TO NEXT QUESTION)
70 (2) Yes, for some boys -- What boys?____________________
5 *MISSING DATA*

30b. When is this usually done?____________________

30c. What school officials are involved?____________________

30d. Are the boys themselves involved in this review procedure?

0 (1) No
10 (2) Yes, sometimes
59 (3) Yes, always
31 *MISSING DATA*

31. Which, if any, of the following provisions are made for increasing the counseling ability of the school's guidance counselors? (CHECK ALL THAT APPLY)

18 (1) School has guidance workshops (at least once in past year)
26 (2) School system has guidance workshops (at least once in past year)
38 (3) Inservice training is provided for new counselors
69 (4) Someone in the school or school system is readily available for personal consultation with a counselor about problems he is having
28 (5) Someone in the school or school system periodically observes the guidance counselors (or new guidance counselors) while they work, and afterwards discuss their performance with them in an attempt to help them improve
8 (6) Other; please specify____________________
____
2 *MISSING DATA*

32. What proportion of disciplinary measures taken by your school (other than those handled in class by teachers) are handled by each of the following?

MN	*MED*	*SD*	*MD*	
33.4%	20.0%	37.1%	3%	by the principal
62.6%	80.0%	38.9%	6%	by an assistant principal or dean
3.0%	0.0%	9.6%	4%	by counselors
0.4%	0.0%	2.0%	7%	other; please specify

33. How many years ago was a guidance program organized at this school?

MN=13.9 MED=13.0 SD=11.7 MD=6%

34. Have there been any important crises involving this school in the past year (for example, community unrest concerning the school; a serious disagreement between the principal and some or all of the teachers; a teacher strike; a physical disaster, such as a fire in the school; major racial conflicts, etc.)?

70	(1)	No
27	(2)	Yes; please describe below:
2		*Minor or questionable mentions*
2		*MISSING DATA*

QUESTIONNAIRE TO COUNSELORS

YOUTH IN TRANSITION

QUESTIONNAIRE TO COUNSELORS IN PARTICIPATING SCHOOLS

1. We would like you to move rapidly through this questionnaire and not to spend a lot of time on any one question.
2. Please try to respond to all questions. Even if you're uncertain about the answer, we'd like to know what you think.
3. The numbers to the far right of the answer boxes are for our use in processing your answers and may be ignored in filling out the questionnaire.
4. To help further insure the anonymity of your answers, your questionnaire is identified only by the school number given below. This number is needed to relate your responses to those of others in the same school.
5. We welcome your comments, and the back cover has been kept blank specifically for that purpose.

THANK YOU IN ADVANCE FOR YOUR HELP

School Number

SURVEY RESEARCH CENTER / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN / ANN ARBOR, MICHIGAN

A. GENERAL INFORMATION ABOUT YOUR SCHOOL

This first set of questions asks for your feelings about various aspects of your present school, its counseling program, and your own position.

CHECK ONE FOR EACH QUESTION BELOW:

	NEVER 1	SELDOM 2	SOMETIMES 3	OFTEN 4	ALWAYS 5	*MISSING DATA*
1. How often do you feel that you can't get to the really important things because of immediate demands?	2	10	36	44	1	7
2. How often do you feel that you have too heavy a work load, one that you can't possibly finish?	5	17	39	24	8	7
3. How often do you feel that the amount of work you have to do may interfere with how well it gets done?	3	17	31	38	3	8
4. How often do your routine administrative duties interfere with your counseling?	6	14	31	37	3	8
5. How often do you feel that the tasks demanded of a counselor require more or different knowledge than he is usually given?	3	29	37	23	0	8

6. How much guidance and direction have you received from administrators in your school relevant to what you should be doing in your role as a counselor?

16	(1) None at all
37	(2) A little
27	(3) A moderate amount
7	(4) A considerable amount
5	(5) A great deal
8	*MISSING DATA*

6a. How does this fit in with what you want?

9	(1) Far too little
25	(2) Too little
54	(3) About the right amount
1	(4) Too much
1	(5) Far too much
10	*MISSING DATA*

7. How much opportunity do you have to carry out your own ideas in your counseling work?

5	(1) Little or no opportunity
15	(2) Some
17	(3) A moderate amount
34	(4) A considerable amount
21	(5) A great deal of opportunity
8	*MISSING DATA*

8. Taking all things into consideration, how satisfied are you with high school counseling as a career?

2	(1) Very dissatisfied
3	(2) Fairly dissatisfied
3	(3) Slightly dissatisfied
3	(4) Slightly satisfied
31	(5) Fairly satisfied
48	(6) Very satisfied
10	*MISSING DATA*

9. Taking all things into consideration, how satisfied are you with your present counseling position in this school?

6	(1) Very dissatisfied
9	(2) Fairly dissatisfied
6	(3) Slightly dissatisfied
6	(4) Slightly satisfied
36	(5) Fairly satisfied
30	(6) Very satisfied
8	*MISSING DATA*

	NONE AT ALL 1	A LITTLE 2	A MODERATE AMOUNT 3	A CONSIDERABLE AMOUNT 4	A GREAT DEAL 5	*MISSING DATA*
10. On the average, how much say or influence do each of the following people or groups usually exercise in determining whether or not a boy will enter the college preparatory program?						
a. The boy himself	0	2	13	42	33	10
b. His parents	0	3	14	41	32	10
c. His counselor	1	14	47	22	7	10
d. His teachers	3	38	32	12	6	10
e. Administrators in the school	24	39	18	5	3	10
11. How much pressure do counselors in your school receive from each of the following groups to get students into college?						
a. Teachers	31	40	19	1	0	9
b. School administrators	28	41	17	4	2	9
c. Students	8	19	33	26	6	9
d. Parents	5	17	28	29	12	9
e. The community (or groups in the community)	30	31	21	7	2	9
12. How much pressure do counselors in your school receive from each of the following groups to get non-college-bound graduates successfully placed in jobs?						
a. Teachers	46	33	12	1	0	9
b. School administrators	44	31	14	2	1	9
c. Students	11	33	29	15	3	9
d. Parents	24	37	21	8	1	9
e. The community (or groups in the community)	34	35	18	4	1	9

	1 NONE AT ALL	2 A LITTLE	3 A MODERATE AMOUNT	4 A CONSIDERABLE AMOUNT	5 A GREAT DEAL	MISSING DATA
13. How much pressure do counselors in your school receive from each of the following groups to help students to deal with their personal (interpersonal and emotional) problems?						
a. Teachers	5	27	38	17	4	8
b. School administrators	14	28	36	11	3	9
c. Students	6	26	36	19	4	8
d. Parents	5	27	41	14	5	9
e. The community (or groups in the community)	28	38	20	3	1	10
14. How much pressure do you feel from each of the following sources to reach or maintain a high level of effectiveness in your counseling?						
a. Other counselors in your school	25	13	28	15	5	15
b. Teachers in your school	9	25	39	15	5	8
c. Administrators in your school	12	19	40	16	6	7
d. Students	10	17	36	24	7	7
e. Parents	10	23	34	20	5	8
f. The community (or groups in the community)	30	28	25	7	2	8

15. At how many colleges and universities would you say personnel in your school have achieved some degree of individual or personal relationship with admissions officers such that when a student from your school applies to that college he is likely to be given more careful consideration than he would without that relationship?

MN=12.5 MED=6.0 SD=18.9 MD=14%

16. With how many businesses would you say personnel in your school have achieved some degree of individual or personal relationship such that when a student from your school applies for a job, he is likely to be given more careful consideration than he would without that relationship?

MN=17.6 MED=10.0 SD=23.3 MD=19%

17. How much effort is made by guidance personnel to convince boys to take summer jobs that are related to their occupational interests?

7	(1) None
30	(2) A little
38	(3) A moderate amount
14	(4) A considerable amount
3	(5) A great deal
8	*MISSING DATA*

18. How much effort is made by guidance personnel to help boys obtain such summer employment?

5	(1) None
32	(2) A little
35	(3) A moderate amount
14	(4) A considerable amount
5	(5) A great deal
9	*MISSING DATA*

19. How much do you like the students you counsel in this school in comparison to students in most other schools?

0	(1) Much less
0	(2) Less
36	(3) About the same
30	(4) More
22	(5) Much more
12	*MISSING DATA*

B. EVALUATION OF COUNSELING PROGRAM

The next four questions ask you to evaluate the actual effectiveness of your school's total counseling program as determined by factors such as the counseling budget, support from school personnel, number of persons on the counseling staff, and characteristics of the counselors themselves.

1. How would you rate the overall guidance and counseling program provided for boys in your high school?

3	(1) Very poor
7	(2) Poor
33	(3) Fair
47	(4) Good
6	(5) Excellent
5	*MISSING DATA*

2. How would you rate the quality of counseling provided to boys in your high school relevant to going to college (including help with curriculum choice, on whether or not to go to college, the choice of colleges, applying, etc.)?

3	(1) Very poor
1	(2) Poor
13	(3) Fair
58	(4) Good
21	(5) Excellent
5	*MISSING DATA*

3. How would you rate the quality of the career-relevant counseling provided to boys in your school who are not planning to attend college (including help with curriculum choice, career decision, job placement, technical training, etc.)?

3	(1) Very poor
10	(2) Poor
40	(3) Fair
35	(4) Good
7	(5) Excellent
6	*MISSING DATA*

4. How would you rate the effectiveness of the counseling program in helping students to deal with their personal (interpersonal and emotional) problems?

4	(1) Very poor
6	(2) Poor
39	(3) Fair
41	(4) Good
5	(5) Excellent
5	*MISSING DATA*

C. SCHOOL PERSONNEL

The questions on this page ask about school personnel. Please keep in mind that your individual responses will remain anonymous and, moreover, that no data will ever be identified with any specific school.

	NOT AT ALL 1	TO A SLIGHT EXTENT 2	TO A MODERATE EXTENT 3	TO A CONSIDERABLE EXTENT 4	TO A GREAT EXTENT 5	*MISSING DATA*
1. To what extent does each of the following apply for the principal in your school?						
a. He is friendly and easily approached . .	*2*	*14*	*16*	*27*	*34*	*8*
b. He treats counselors as colleagues on an equal footing with himself rather than as subordinates	*15*	*11*	*13*	*25*	*27*	*8*
c. He is receptive to my influence on matters of concern to me	*6*	*15*	*17*	*25*	*29*	*8*
d. He recognizes the value of an effective counseling program	*7*	*12*	*13*	*24*	*37*	*8*
2. To what extent does each of the following apply for the majority of teachers with whom you have contact in your school?						
a. They are friendly to counselors here . .	*0*	*6*	*23*	*42*	*21*	*9*
b. They try to cooperate with counselors in dealing with students	*0*	*5*	*27*	*39*	*20*	*9*
c. They recognize the value of an effective counseling program	*0*	*10*	*40*	*29*	*12*	*8*

3. Are you the only guidance counselor in this school?

16	(1) Yes (SKIP TO NEXT PAGE)
76	(2) No (Answer the next two questions about guidance counselors in your school)
8	*MISSING DATA*

	NOT AT ALL 1	TO A SLIGHT EXTENT 2	TO A MODERATE EXTENT 3	TO A CONSIDERABLE EXTENT 4	TO A GREAT EXTENT 5	*MISSING DATA*
a. To what extent do they help one another to deal with problems in their work? . .	*1*	*3*	*15*	*29*	*29*	*24*
b. To what extent is there a sense of team effort among them?	*2*	*4*	*15*	*23*	*32*	*24*

D. TIME ALLOCATION

The next set of questions is concerned with how your time is utilized. When we ask for numbers (such as hours or percentages), we aren't asking you to compute the exact figures, but merely to give your best estimates.

1. How many students are assigned to you in your capacity as a guidance counselor?

MN=421 MED=400 SD=174 MD=13%

2. Are the students you are responsible for counseling a fairly representative cross-section from the student body or are they a special group (such as primarily of one sex, in one grade, or in one program of studies)?

67	(1) A fairly representative cross-section
24	(2) Other (Please describe):
9	*MISSING DATA*

3. About what proportion of a full-time guidance and counseling assignment do you carry in this school? (Include all time devoted to group counseling, but exclude time spent on teaching.)

0	(1) 0%
0	(2) 1-19%
3	(3) 20-39%
10	(4) 40-59%
8	(5) 60-79%
7	(6) 80-99%
67	(7) 100%
6	*MISSING DATA*

4. About what proportion of a full-time teaching assignment do you carry in this school? (Include time spent teaching counseling-related subjects, and substitute teaching, but exclude group counseling.)

70	(1) 0%
8	(2) 1-19%
7	(3) 20-39%
3	(4) 40-59%
4	(5) 60-79%
1	(6) 80-99%
0	(7) 100%
7	*MISSING DATA*

5. How many hours are you required to spend in school in an average week? (Include time spent at required meetings, lunch, etc.)

MN=37.9 MED=40.0 SD=7.1 MD=9%

6. In addition to the time you are required to spend in school, how much additional time do you spend on counseling and guidance related work (at school or at home)?

MN=7.7 MED=5.0 SD=7.3 MD=11%

7. For what proportion of the time you spend in guidance and counseling activities would you say that appropriate use is made of your skills and training as a guidance counselor?

1	(1) 0%
3	(2) 1-19%
10	(3) 20-39%
20	(4) 40-59%
27	(5) 60-79%
23	(6) 80-99%
7	(7) 100%
10	*MISSING DATA*

8. How many hours would you estimate that you spend in the average week during the school year in your role as a guidance counselor on each of the following activities?

	MN	*MED*	*SD*	*MD*
a. Counseling sessions with individual students	*16.8*	*16.0*	*7.3*	*11%*
b. Counseling sessions with groups of students	*2.6*	*2.0*	*2.8*	*11%*
c. Disciplining students	*1.0*	*0.0*	*3.1*	*9%*
d. Talking with parents of students	*4.1*	*3.0*	*3.1*	*11%*
e. Handling applications, recommendations, correspondence, special projects, etc. (requiring more than clerical skills)	*8.5*	*8.0*	*6.2*	*12%*
f. Typing, filing, and other clerical work	*4.3*	*3.0*	*4.4*	*11%*

9. About what percent of the total time you spend on all guidance and counseling activities is devoted to boys in grades 10-12?

5	(1) 0%
6	(2) 1-19%
15	(3) 20-39%
51	(4) 40-59%
10	(5) 60-79%
3	(6) 80-99%
3	(7) 100%
7	*MISSING DATA*

10. Thinking now only of the time you devote to 10-12 grade boys in guidance and counseling activities, what proportion of that time do you spend on each of the following?

10% I counsel no boys in grade 10 through 12 (SKIP TO NEXT PAGE)

MN	*MED*	*SD*	*MD*	
24.3	*20.0*	*14.1*	*16%*	Helping boys to make decisions regarding their future occupation and education (including administration and interpretation of tests designed for this purpose), or teaching the process of making such decisions
21.4	*20.0*	*14.6*	*16%*	Helping boys to select and gain admission to colleges and other schools (including handling applications and recommendations, visiting campuses, etc.)
6.6	*5.0*	*5.8*	*16%*	Helping boys secure permanent employment (including employment applications, contacting potential employers, etc.)
16.3	*10.0*	*14.6*	*16%*	Counseling boys about personal problems
20.5	*20.0*	*14.2*	*18%*	Advising about program and course selection
11.4	*10.0*	*10.6*	*16%*	All other guidance and counseling activities concerned with 10-12 grade boys

E. TRANSFERS BETWEEN PROGRAMS

1. In general, how difficult would it be for a boy in your school to transfer between the following programs at the end of the tenth grade? Answer in terms of probable missed course work, not in terms of the average ability of students in the two programs.

CHECK ONE BOX FOR EACH LINE
CHECK BOX 0 IF ONE OR BOTH OF THE PROGRAMS DO NOT EXIST

	NOT AT ALL DIFFICULT 1	SLIGHTLY DIFFICULT 2	MODERATELY DIFFICULT 3	QUITE DIFFICULT 4	EXTREMELY DIFFICULT 5	CHECK HERE IF ONE OR BOTH ARE NOT OFFERED 0	MISSING DATA
a. From General to College Prep	28	29	19	7	4	10	3
b. From General to Vocational	53	21	4	3	0	16	3
c. From Vocational to College Prep	19	17	21	16	8	16	4
d. From Vocational to General	55	17	6	1	0	18	4
2. Now, using the same criteria, how easy would it be for a boy who wishes to transfer at the end of the eleventh grade:							
a. From General to College Prep	12	11	20	21	23	10	3
b. From General to Vocational	24	22	17	9	7	17	4
c. From Vocational to College Prep	9	7	12	25	27	16	4
d. From Vocational to General	35	24	14	7	0	17	4

3. How important is it for gaining admission to college that a boy in your school be in the college preparatory program?

5	(1) Not at all important
9	(2) Slightly important
21	(3) Somewhat important
24	(4) Quite important
26	(5) Very important
5	(6) Absolutely essential
10	*MISSING DATA*

4. How often do you try to change the attitudes of parents of students concerning whether or not their son should or should not attend college?

1	(1) Never
27	(2) Seldom
54	(3) Sometimes
13	(4) Often
1	(5) Very often
6	*MISSING DATA*

5. How often do you try to change the attitudes of parents of students concerning the choice of careers by their son?

6	(1) Never
35	(2) Seldom
48	(3) Sometimes
3	(4) Often
2	(5) Very often
6	*MISSING DATA*

F. BACKGROUND

The following questions are about your education and experience.

1. What is the highest level of education you have attained? (CHECK ONE)

0	(1) High school
0	(2) Some college
0	(3) Bachelor's Degree
12	(4) Bachelor's Degree plus some credit
11	(5) Master's Degree
69	(6) Master's Degree plus some credit
1	(7) Doctor's Degree
7	*MISSING DATA*

2. How many semester credit hours have you had in graduate guidance and counseling courses?

MN=33.3 MED=30.0 SD=16.4 MD=10%

3. As a part of your college training, did you take a practicum or internship in counseling (supervised counseling)?

54	(1) Yes
37	(2) No
9	*MISSING DATA*

4. How long ago did you take your last college or university course in a guidance and counseling subject?

15	(1) I am currently taking such a course
1	(2) I have never taken such a course
76	(3) The last time I took a course was ____ years ago

(years ago) *MN=4.1 MED=2.0 SD=11.9 MD=8%*

5. What non-college training in counseling have you received? (CHECK ALL THAT APPLY)

% YES

55	(1) None
22	(2) Training program in your present school system
10	(3) Training program in another school system
4	(4) Other (please specify):

____

____

____

MISSING DATA

6. Counting the present year, what is the number of years of counseling and guidance experience you have had (either part-time or full-time)?

MN	*MED*	*SD*	*MIN*	*MAX*	*MD*
7.4	*6.0*	*5.7*	*1*	*33*	*8%*

7. Counting the present year, what is the number of years of teaching experience you have had (either part-time or full-time)?

MN	*MED*	*SD*	*MIN*	*MAX*	*MD*
15.1	*12.0*	*10.2*	*0*	*44*	*9%*

8. Were you a teacher before you became a counselor?
   (1) No
   (2) Yes; How many years?

MN	*MED*	*SD*	*MIN*	*MAX*	*MD*
10.0	*8.0*	*7.2*	*0*	*37*	*10%*

9. How many conferences, workshops, or training sessions related to guidance and counseling have you attended during the last 12 months, and how many were worthwhile?

MN	*MED*	*SD*	*MD*	
4.6	*3.0*	*4.3*	*8%*	conferences attended
3.4	*3.0*	*3.3*	*8%*	were worthwhile

10. How many of the total conferences, etc., were required, and of those how many were worthwhile?

MN	*MED*	*SD*	*MD*	
1.1	*0.0*	*2.4*	*9%*	were required
0.8	*0.0*	*1.7*	*9%*	were worthwhile

This questionnaire was designed to fit a wide range of different counseling programs, so it is possible that we missed asking about some important special feature(s) of your program. If so, we would appreciate it if you could include a note about this on the blank last page.

MANY THANKS FOR YOUR COOPERATION

QUESTIONNAIRE TO TEACHERS

YOUTH IN TRANSITION

QUESTIONNAIRE TO TEACHERS IN PARTICIPATING SCHOOLS

1. We would like you to move rapidly through this questionnaire and not to spend a lot of time on any one question. Give your best estimates without worrying about absolute precision.
2. Please try to respond to all questions. Even if you're uncertain about the answer, we'd like to know what you think.
3. The numbers to the far right of the answer boxes are for our use in processing your answers and may be ignored in filling out the questionnaire.
4. To help further insure the anonymity of your answers, your questionnaire is identified only by the school number given below. This number is needed to relate your responses to those of others in the same school.
5. We welcome your comments, and the back cover has been kept blank specifically for that purpose.

THANK YOU IN ADVANCE FOR YOUR HELP

School Number

SURVEY RESEARCH CENTER / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN / ANN ARBOR, MICHIGAN 48106

a. Does your school have an assistant principal (or vice principal or dean)?

70 1. Yes. All future questions about the "Assistant Principal" refer to whichever of these offices exists in your school.

24 2. No. Please leave blank all future questions about the "Assistant Principal".

6 *MISSING DATA*

b. Does your school have any guidance counselors? (Do not count the principal if he does counseling)

88 1. Yes

6 2. No. Please leave blank all future questions about "Counselors".

6 *MISSING DATA*

c. Does your school have any department heads or department chairmen?

75 1. Yes

18 2. No. Please leave blank all future questions about "Department Heads".

7 *MISSING DATA*

A. GENERAL INFORMATION ABOUT YOUR SCHOOL

This first set of questions covers a variety of topics including school facilities, personnel, administration, community relations, and your own role in the school.

CHECK ONE BOX FOR EACH QUESTION BELOW:

	NEVER 1	SELDOM 2	SOMETIMES 3	OFTEN 4	ALWAYS 5	*MISSING DATA*
1. How often do you feel that you can't get to the really important things because of immediate demands? . . .	3	23	48	26	1	0
2. How often do you feel that you have too heavy a work load, one that you can't possibly finish?	11	35	33	18	3	0
3. How often do you feel that the amount of work you have to do may interfere with how well it gets done? . . .	5	24	40	25	5	0
4. How often do your routine administrative duties interfere with your teaching?	8	35	38	17	1	1
5. How often are your administrators willing to overlook deviations from policies or procedures when such deviations will serve to better accomplish the broader objectives of the school?	3	17	39	32	7	1

	VERY POOR 1	POOR 2	FAIR 3	GOOD 4	EXCELLENT 5	*MISSING DATA*
6. In comparison with other high schools, what kind of a reputation does your school have with teachers in the region?	2	6	20	53	18	1
7. How would you rate the quality of the textbooks you use (or other teaching materials used in place of textbooks)?	1	5	21	54	19	1
8. How would you rate the quantity (number and variety) of textbooks available to teachers in this school? . . .	2	9	25	44	19	1
9. How would you rate the amount of classroom space available in your school?	9	23	30	28	10	1
10. How would you rate the success of your administrators in dealing with major problems that you have seen in your school?	7	15	31	39	9	1

	1 NOT AT ALL	2 TO A SLIGHT EXTENT	3 TO A MODERATE EXTENT	4 TO A CONSIDERABLE EXTENT	5 TO A GREAT EXTENT	MISSING DATA
11. To what extent do you identify yourself with (i.e., feel a sense of attachment or belonging to) each of the following?						
a. The school you are in	1	5	18	39	37	0
b. The teachers in your school	1	10	35	40	14	0
c. Your school system	3	14	30	36	17	0
d. The community in which you teach	5	17	27	28	22	1
e. The teaching profession	0	2	13	37	47	0
12. To what extent do you have an opportunity in school to spend time with faculty or staff members with whom you are friendly?	3	32	41	18	4	1
13. To what extent is there a sense of team effort among the teachers in your school?	6	25	39	24	5	0
14. To what extent is the communication between the various staff and faculty members in your school open and frank? .	5	22	35	30	8	0
15. To what extent does the administration actively try to improve working conditions for teachers?	6	23	31	29	10	1
16. To what extent do you feel that your school's administrators will back you up if parents try to interfere with your teaching?	5	10	21	32	32	1
17. To what extent are teachers expected to adjust to this school rather than change it?	2	11	36	32	18	1
18. To what extent is high quality teaching an important factor for the attainment of high esteem among teachers in this school?	3	11	32	39	14	1
19. To what extent are the relationships between most teachers in this school friendly and congenial?	1	6	31	46	15	0
20. To what extent do you feel free to expose the problems and uncertainties you experience in the classroom?						
a. To administrators in your school	6	15	25	32	22	1
b. To a number of other teachers in your school .	2	9	26	39	24	0
21. To what extent do you have a chance to get to know students well?	1	9	29	37	24	0

	1 NOT AT ALL	2 TO A SLIGHT EXTENT	3 TO A MODERATE EXTENT	4 TO A CONSIDERABLE EXTENT	5 TO A GREAT EXTENT	*MISSING DATA*
22. A program of studies taken by a student (such as college preparatory, vocational, etc.) may consist of anything from a patchwork of individual and unrelated courses to a highly integrated and coordinated program. To what extent would you say the courses in the programs with which you are associated are integrated into a meaningful whole? .	3	13	32	36	15	1
23. To what extent do the students in your school display courtesy and respect for their teachers?	1	14	42	36	6	1
24. To what extent do you feel pressure from each of the following sources to reach or maintain what you consider to be a high level of teaching effectiveness?						
a. Administrators in the school	12	23	37	21	6	1
b. Teachers in your school	16	24	36	19	3	1
c. Students	11	19	34	25	10	1
25. To what extent would you say there is tension or conflict between the two groups in each of the following pairs?						
BETWEEN:						
a. Students and teachers	12	54	27	5	1	1
b. Different groups of teachers	17	45	22	11	4	1
c. Teachers and administrators	12	37	29	14	7	1
d. Counselors and teachers	22	37	21	10	3	7
26. To what extent would you say each of the following influences the way your school is run?						
a. Local colleges and universities	22	32	23	16	6	1
b. P.T.A. or P.T.O.	44	37	12	3	2	1
c. Various political groups in the community . . .	38	33	14	9	4	1
d. Teachers Association or Teachers Union	22	36	26	12	2	1
27. To what extent do you feel you are able to influence the way your local teachers association or teachers union is run?	27	35	25	10	3	1
28. To what extent are there active, cooperative relationships between the school and other organizations in the community (such as businesses, employment agencies, helping agencies, etc.)?	5	26	36	27	6	1

To what extent do you agree or disagree with each of the following statements?

		1 DISAGREE	2 DISAGREE SOMEWHAT	3 AGREE SOMEWHAT	4 AGREE	MISSING DATA
29	Most parents of students in this school are indifferent to school practices	17	25	37	20	0
30	The people in this community, generally, have a sincere and wholehearted interest in the school system .	12	25	36	26	1
31	Parents often ask for appointments with teachers to discuss their children's school work	42	26	23	8	1
32	Most of the people in this community understand and appreciate a good education	18	27	34	21	1
33	Parents of students here seem interested in their children's progress	9	28	43	19	1
34	This community is willing to support a good program of education	13	20	43	23	1
35	There are strong conflicting views in this community over how the school system should be run	28	26	26	19	1

36 On the average, how would you rate the performance of the following groups or persons in your school in contrast to the performance of people in comparable jobs in other schools?

	1 FAR BELOW AVERAGE	2 SOMEWHAT BELOW AVERAGE	SLIGHTLY BELOW AVERAGE	4 SLIGHTLY ABOVE AVERAGE	5 SOMEWHAT ABOVE AVERAGE	6 FAR ABOVE AVERAGE	MISSING DATA
a. Principal	7	10	12	23	31	17	2
b. Teachers	0	3	10	34	44	8	1
c. Counselors	5	7	18	33	25	6	8
d. Students	3	10	22	36	24	4	1

B. INFLUENCE IN THE SCHOOL

The following questions deal with the influence of various people or groups in your school. We would like you to make two sets of ratings:

A. the actual amount of influence each person or group has; and

B. the amount of influence you feel each should have ideally.

1. For each of the following groups in your school, please rate their actual and ideal influence over the way your school is run:

	(A) ACTUAL INFLUENCE						(B) IDEAL INFLUENCE					
	LITTLE OR NONE 1	SOME 2	MODERATE 3	CONSIDERABLE 4	A GREAT DEAL 5	*MISSING DATA*	LITTLE OR NONE 1	SOME 2	MODERATE 3	CONSIDERABLE 4	A GREAT DEAL 5	*MISSING DATA*
a. The School Board and Superintendent's Office . .	2	6	14	33	44	1	3	9	38	33	16	2
b. The Principal	5	10	23	35	26	1	0	2	18	44	34	2
c. Assistant Principal(s)	6	13	26	21	7	27	1	7	26	29	10	27
d. Department Heads	14	26	23	13	4	21	2	9	29	31	9	22
e. Teachers	16	31	31	16	5	1	1	6	29	43	19	1
f. Counselors	13	29	30	18	3	8	4	17	40	25	6	8
g. Students	24	35	25	13	3	1	5	36	39	13	4	1
h. Parents of students	27	37	20	11	4	1	12	39	34	11	3	2

2. Now indicate the amount of your own actual influence in each of the following decisions and how much you feel you should have ideally:

	(A) ACTUAL INFLUENCE						(B) IDEAL INFLUENCE					
a. Selecting what courses to teach	26	21	18	20	15	1	1	9	24	38	26	2
b. Deciding what to cover in courses	4	7	10	30	48	1	0	2	11	37	48	2
c. Selecting what textbooks to use	18	12	15	23	31	1	1	3	12	38	44	2
d. Evaluating school programs (college prep, etc.)	34	23	23	14	5	1	2	10	33	38	15	3
e. Planning curriculum changes .	31	22	22	16	9	1	2	8	29	39	21	2
f. Making up and carrying out rules of student conduct . .	26	25	26	15	7	1	1	8	29	39	21	2

C. PLANNING, EVALUATION, AND COORDINATION

1. The following questions cover ongoing planning and evaluation in your school, with specific attention to your involvement in these activities. For each of the activities listed below, we would like you to make two ratings:
   - A. the approximate number of hours *you personally* have spent *this school year* working in cooperation with other teachers and/or administrators on this activity; and,
   - B. whether you consider this amount of your time to be enough, too little, or too much.

	(A) HOURS YOU HAVE SPENT: (ROUGH ESTIMATE)				(B) THIS IS:			
	MN	MED	SD	MD	1 TOO LITTLE	2 ENOUGH	3 TOO MUCH	MISSING DATA
EVALUATING THE EFFECTIVENESS OF:								
a. Specific courses	9.8	3.0	18.3	9%	60	30	2	9
b. Specific departments	7.8	2.0	16.5	9%	57	30	2	11
c. Programs of study (college prep) .	4.3	0.0	12.4	9%	66	21	1	12
d. The school as a whole	7.7	2.0	15.6	9%	61	26	3	11
PLANNING CHANGES RELATED TO:								
e. Specific courses	8.1	2.0	16.0	10%	58	30	2	11
f. Specific departments	5.9	1.0	13.8	10%	57	29	1	13
g. Programs of study	5.3	0.0	12.5	10%	62	24	1	13
h. The school as a whole	5.4	0.0	12.4	11%	63	23	1	12

2. At how many faculty or committee meetings that you have attended during the past two years has serious consideration been given to:

	MN	MED	SD	MD
a. Clarification of goals for particular programs of study	4.0	2.0	6.3	7%
b. Clarification of your school's goals	3.8	2.0	7.3	7%

3. How much *coordination* of each of the following types is there between teachers in your school?

	1 NONE	2 A LITTLE	3 MODERATE AMOUNT	4 QUITE A BIT	5 A GREAT DEAL	MISSING DATA
a. Coordination in the design of sequential courses (like first and second year English) . .	7	20	32	28	11	3
b. Coordination in the design of content-related courses (like math and sciences, or history and English literature)	19	32	26	14	6	4
c. Coordination in the homework demands and test schedules for courses being taken simultaneously by the same group of students	29	29	24	12	3	3
d. Coordination between teachers in dealing with problems of individual students	10	35	30	19	4	3

D. EVALUATION OF TEACHING

In every school the performance of teachers is evaluated at least informally, and often formally. These next questions deal with the way teaching performance is evaluated in your school.

1. How much do you think each of the following characteristics actually counts in the way the performance of teachers in your school is evaluated (both formally and informally) by the administration?

	LITTLE OR NONE 1	SOME 2	MODERATE 3	CONSIDERABLE 4	A GREAT DEAL 5	*MISSING DATA*
a. Innovativeness	*12*	*26*	*33*	*22*	*5*	*2*
b. How well one is liked by a superior	*10*	*19*	*27*	*28*	*14*	*2*
c. Rapport with students	*3*	*10*	*26*	*44*	*15*	*2*
d. Keeping students quiet and orderly	*2*	*9*	*24*	*41*	*22*	*2*
e. Student improvement in mastery of the subject	*8*	*16*	*35*	*30*	*9*	*2*
f. Punctuality in handling administrative details	*3*	*14*	*28*	*34*	*20*	*2*
g. Increasing students' desire to learn.	*9*	*20*	*32*	*27*	*12*	*2*
h. Style of classroom presentation	*10*	*18*	*33*	*28*	*11*	*2*
i. Helpfulness to individual students in personal matters	*17*	*25*	*31*	*19*	*6*	*2*
j. Keeping room and bulletin boards neat.	*14*	*26*	*31*	*20*	*8*	*1*
k. Work done in student extracurriculars.	*10*	*23*	*32*	*26*	*8*	*2*
l. Other (please specify)________	*1*	*1*	*2*	*6*	*7*	*84*

2. In your opinion, how much awareness of your teaching effectiveness does each of the following individuals or groups have?

a. Principal	*13*	*19*	*26*	*28*	*13*	*1*
b. Assistant Principal(s)	*12*	*16*	*21*	*18*	*7*	*26*
c. Your department chairman	*7*	*9*	*17*	*22*	*20*	*26*
d. Other teachers	*11*	*25*	*37*	*22*	*5*	*1*
e. Counselors	*17*	*24*	*28*	*19*	*5*	*7*
f. Your students	*1*	*4*	*19*	*45*	*30*	*1*
g. Parents of your students	*12*	*28*	*32*	*21*	*6*	*2*

3. How much does each of the following (either knowingly or unknowingly) help you to improve your teaching?

a. Students	*2*	*6*	*17*	*43*	*32*	*1*
b. Other teachers in the school	*12*	*21*	*37*	*24*	*6*	*1*
c. Administrators in the school	*27*	*26*	*29*	*14*	*4*	*1*
d. Other resource people provided by the school.	*43*	*21*	*20*	*10*	*3*	*3*

4. Is any formal evaluation of the performance of teachers made in your school (i.e., one which goes into the records)?

32	(1)	No (PLEASE SKIP TO NEXT PAGE)
64	(2)	Yes
4		*MISSING DATA*

5. How much actual influence does each individual or group listed below have in the formal evaluation of a teacher's performance?

	LITTLE OR NONE 1	SOME 2	MODERATE 3	CONSIDERABLE 4	A GREAT DEAL 5	*MISSING DATA*
a. Principal	4	5	7	15	34	36
b. Assistant Principal(s)	16	9	8	11	10	46
c. Department Heads	15	7	8	12	13	44
d. Other teachers	47	10	5	1	0	37
e. Counselors	43	11	5	3	0	38
f. Students	41	10	7	4	2	37
g. Parents	48	9	5	1	1	37

6. Has a formal evaluation of your teaching performance been made in this school?

12	(1)	No (PLEASE SKIP TO NEXT PAGE)
57	(2)	Yes
31		*MISSING DATA*

7. How many times has this been done in the last 12 months?

MN=1.8 MED=1.0 SD=1.9 MD=42%

8. How many times have the results of these evaluations been given to you in writing and/or discussed with you in a regular interview in the last 12 months?

(in writing) *MN=1.0 MED=1.0 SD=1.6 MD=42%*

(in an interview) *MN=1.1 MED=1.0 SD=1.3 MD=42%*

	1	2	3	4	5	*MISSING DATA*
9. How much has the formal evaluation of your performance helped you to improve your teaching performance?	23	12	12	7	4	43
10. How much does having a formal teacher evaluation interfere with your ability to communicate with and seek help from the evaluating person(s)?	42	7	5	2	2	43
11. How much does having a formal teacher evaluation help you to express problems and complaints that you might not otherwise express?	26	12	8	6	3	43

E. INNOVATION

1. How would you rate the overall innovativeness of your high school (in terms of how often new ways of administration, organization, teaching, counseling, etc. are used)?

12	(1)	Far below average
22	(2)	Somewhat below average
40	(3)	About average
23	(4)	Somewhat above average
3	(5)	Far above average
1		*MISSING DATA*

2. In your opinion, how are each of the following groups best characterized in terms of their overall impact on school innovation: primarily supportive, primarily resistant, or neither? CHECK ONE BOX FOR EACH GROUP:

	RESISTANT (1)	NEITHER (2)	SUPPORTIVE (3)	*MISSING DATA*
a. School Board and Superintendent's Office . .	20	27	50	3
b. Administrators in the school.	14	23	60	3
c. Teachers	7	24	67	3
d. Counselors	4	37	50	9
e. Parents of students . . .	9	59	29	3

F. YOUR PRINCIPAL

1. Listed below are five reasons generally given by people when they are asked why they do the things others suggest or want them to do. Please read all five reasons first, then rate each reason according to how important it is as a reason for your doing the things your principal suggests or wants you to do. (The same rating may be given to more than one reason.)

	IMPORTANCE FOR YOU: NOT AT ALL IMPORTANT 1	SLIGHTLY IMPORTANT 2	SOMEWHAT IMPORTANT 3	QUITE IMPORTANT 4	VERY IMPORTANT 5	*MISSING DATA*
a. You respect him personally, and thus want him to respect and admire you	13	15	23	27	20	3
b. You respect his competence and judgment about things in which he is more experienced than you are	11	13	18	31	23	3
c. You know he can provide special help and benefits to you for cooperating with him . . .	23	24	23	18	10	3
d. You feel he has a legitimate right, considering his position, to expect you to carry out his suggestions	4	10	20	34	30	3
e. You know he can apply pressure or penalize you for not cooperating	35	25	15	12	10	3

2. To what extent does each of the following apply for the principal in your school? Please keep in mind that your individual responses will remain anonymous and, moreover, that no data will ever be identified with any specific school.

	NOT AT ALL 1	TO A SLIGHT EXTENT 2	TO A MODERATE EXTENT 3	TO A CONSIDERABLE EXTENT 4	TO A GREAT EXTENT 5	
a. The principal understands well the jobs he supervises.	5	14	24	30	24	4
b. He does a good job of dealing with the people he supervises.	11	17	21	27	20	4
c. He is friendly and easily approached. . . .	7	13	18	25	34	4
d. He treats teachers as colleagues on an equal footing with himself rather than as subordinates.	11	12	17	28	29	4
e. He plays favorites and allows special priveleges to some staff members but not to others. . .	43	26	11	9	7	4
f. He has been given the freedom to act and the authority he needs in order to carry out his responsibilities.	6	15	25	31	20	4
g. He initiates new programs or activities to improve the school.	13	24	29	20	10	4
h. He is more interested in evaluating teachers than in helping them to improve.	51	19	12	7	5	5
i. He actively tries to influence the superintendent and school board to gain their support for school programs and personnel.	18	20	26	19	11	6
j. He is successful in getting their support and cooperation when he tries.	12	23	31	21	7	7
k. He actively tries to influence parents (and other relevant citizen groups) to gain their support for school programs and personnel.	11	23	26	24	11	5
l. He is successful in getting their support when he tries.	8	23	34	22	6	6
m. He is receptive to my influence on matters of concern to me.	8	14	25	31	17	4

G. SCHOOL OBJECTIVES

Below are listed several possible long-term objectives that might be held by a high school. We would like you to make two ratings of each objective:

(A) how much importance do you think the administrators in your school (principal, assistant principal, etc.) attach to each of the following objectives for your school? Make your judgment based on what you think your administrators are actually trying to do; and

(B) how much importance do you think should be attached to each objective in your high school?

	(A) APPARENT IMPORTANCE TO YOUR SCHOOL ADMINISTRATORS						(B) IMPORTANCE YOU THINK SHOULD BE GIVEN					
	Low 1	Moderate 2	High 3	Very High 4	Extremely High 5	*MISSING DATA*	Low 1	Moderate 2	High 3	Very High 4	Extremely High 5	*MISSING DATA*
1. Transmitting a thorough knowledge of subject matter	4	22	33	28	12	2	0	3	22	39	33	3
2. Preparing students to assume the family roles of spouse and parent	17	45	24	10	3	2	1	15	36	28	18	2
3. Preventing drop-outs	10	28	28	21	12	2	2	12	29	32	24	2
4. Developing students' interests in political processes and social issues .	13	35	31	15	4	2	0	9	36	36	17	2
5. Maintaining order and quiet in the school	8	20	28	26	17	2	1	9	32	34	24	2
6. Increasing students' motivation and desire to learn	10	32	30	19	8	2	0	1	18	36	43	2
7. Improving students' social and psychological adjustment	10	35	32	16	5	2	0	5	30	37	26	2
8. Developing students' concern for others .	13	36	31	12	6	2	0	4	26	37	31	2
9. Developing outstanding athletes and athletic teams	7	23	24	26	19	1	9	37	35	11	6	2
10. Increasing student understanding of occupational opportunities and of the necessary skills, training, and interests	8	30	33	21	7	2	0	3	28	40	27	2
11. Responding to the individual academic needs of students	11	30	33	19	5	2	0	3	24	40	31	2
12. Getting a high proportion of students into college	6	24	34	23	12	2	2	21	39	23	13	2
13. Achieving outstanding academic performance	6	25	35	23	9	2	0	8	35	34	21	2
14. Giving non-college-bound students vocational skills	13	29	27	21	8	2	0	2	21	38	37	2

H. OPPORTUNITIES FOR STUDENTS

The next questions deal with the types of opportunities and requirements you think your school provides for students in grades 10 through 12. The questions are written to parallel very closely some questions asked of the boys in the study.

	NOT AT ALL 1	A LITTLE 2	SOME 3	QUITE A BIT 4	VERY MUCH 5	*MISSING DATA*
1. How much does your school give students a chance to be with their friends and enjoy each other's company in school-related activities?	*1*	*10*	*27*	*47*	*14*	*1*
2. How much does your school give students a chance to do things where they might win or achieve success--doing things that are challenging; winning in competition with others; trying to reach difficult goals?	*1*	*8*	*31*	*46*	*14*	*1*
3. How much does your school give students a chance to get to know adults (e.g., teachers) well--to talk to them privately and get their opinions or advice?	*4*	*28*	*38*	*23*	*6*	*2*
4. How much does your school require students to do things were they might fail?	*9*	*31*	*43*	*12*	*1*	*3*
5. How much does your school give students a chance for improving themselves--that is, for learning new things and doing better than they have in the past?	*1*	*13*	*37*	*39*	*8*	*2*
6. How much does your school actually require students to improve themselves?	*8*	*29*	*40*	*19*	*3*	*2*
7. How much does your school give students a chance for using a lot of intelligence?	*1*	*16*	*34*	*37*	*11*	*1*
8. How much does your school actually require students to use a lot of intelligence?	*5*	*23*	*44*	*21*	*3*	*4*
9. How much does your school give students a chance to be independent--that is, having a lot of freedom to decide what they will do; and not having people watching over them and telling them what to do?	*10*	*34*	*33*	*18*	*3*	*2*

10. How much independence do you think boys should have in your school?

6	(1) Much less than they now have
22	(2) Somewhat less than they now have
41	(3) The present amount is just about right
25	(4) Somewhat more than they now have
4	(5) Much more than they now have
2	*MISSING DATA*

I. ATTITUDES AND FEELINGS

The questions below ask about some of your own attitudes and feelings. They are exactly the same as some of the questions asked of the sample of boys in your school. We have included them here because we think it is important to obtain certain parallel information from teachers and students.

Please respond to the following statements by indicating how often they are true for you.

	1 NEVER TRUE	2 SELDOM TRUE	3 SOMETIMES TRUE	4 OFTEN TRUE	5 ALWAYS TRUE	MISSING DATA
1. When I do a job, I do it well	0	0	10	73	17	1
2. I lose my temper easily	12	58	26	4	0	0
3. I feel that I can't do anything right.	39	48	12	1	0	1
4. I am usually patient with others	0	2	10	70	17	1
5. I am able to do things as well as most other people . .	0	1	11	65	22	0
6. If someone doesn't treat me right, it annoys me . . .	2	21	41	27	9	1
7. I feel I do not have much to be proud of	49	40	7	3	1	0
8. I get irritated a lot more than people know about. . .	11	36	31	19	2	1
9. Sometimes I think I am no good at all	56	31	11	1	0	1
10. I am very satisfied with life	2	9	20	52	16	1
11. I feel I have a number of good qualities	0	1	12	58	28	0
12. I carry a chip on my shoulder	52	40	6	1	0	1
13. I take a positive attitude toward myself	1	3	16	55	25	1
14. Even small things irritate me	21	56	19	3	0	1
15. I feel that my life is not very useful	59	32	7	1	1	1
16. I feel like a powder keg ready to explode	57	33	8	1	0	1
17. I am a useful person to have around	0	2	21	57	20	1
18. I feel that I'm a person of worth, at least on an equal plane with others	0	1	8	46	45	0

J. SOURCES OF SATISFACTION

The same person or circumstance may be a source of both satisfaction and of dissatisfaction; for example, you may like a person, but you also may be frustrated by some of his behaviors. For each of the following aspects of your present job we would like you to make two ratings:

(A) how much satisfaction you derive from it; and

(B) how much dissatisfaction you derive from this same aspect.

	(A) How much SATISFACTION do you derive from this					(B) How much DISSATISFACTION do you derive from this				
	1 NONE	2 A LITTLE	3 SOME	4 A GREAT DEAL	MISSING DATA	1 NONE	2 A LITTLE	3 SOME	4 A GREAT DEAL	MISSING DATA
1. Teaching as a career	0	2	17	80	1	14	48	31	6	2
2. Your present teaching position	1	5	28	66	1	15	42	32	9	2
3. The way your school system is run . . .	6	25	49	18	2	6	27	42	23	2
4. The way your particular school is run .	6	20	49	24	2	7	31	39	21	3
5. The way your principal handles his job .	9	18	39	32	1	17	31	32	18	2
6. The congeniality of the teachers . . .	2	13	43	42	1	26	42	24	6	2
7. The opportunities you have to work collaboratively with other teachers . .	7	25	44	22	2	26	37	27	7	3
8. The general behavior of students in your school	3	17	54	25	1	5	37	41	16	2
9. The pay scale in your school	8	17	48	26	1	18	29	32	20	2
10. The courses you have been assigned . .	1	5	27	65	1	41	34	18	5	3
11. The students you have been assigned . .	1	8	44	46	1	21	41	29	6	2
12. The way your performance is evaluated	14	19	39	25	4	32	27	24	11	5
13. Your chances for advancement or promotion	24	22	33	18	3	33	25	25	14	4
14. The objectives toward which your school's administration seems to be working . .	12	24	43	19	2	17	32	34	15	3
15. The opportunity your job provides to use your present knowledge and skills . . .	2	10	34	53	2	35	34	21	7	3
16. The opportunity your job provides to acquire new knowledge and skills . . .	9	22	38	30	1	30	34	25	9	2
17. The amount of freedom you have to carry out your own ideas	2	12	26	59	1	43	32	18	5	2

K. BACKGROUND AND TEACHING ASSIGNMENTS

There are certain individual characteristics of teachers that are important to a full understanding of our data. Thus in this final section we want to ask a few questions about your background, experience, and the like.

1. Your sex:

56	(1)	Male
44	(2)	Female
0		*MISSING DATA*

2. Are you a full-time teacher?

96	(1)	Yes
3	(2)	No-- I teach ____% of a full-time load.
1		*MISSING DATA*

3. Are you presently the chairman of your department?

19	(1)	Yes
56	(2)	No
25	(3)	My department does not have a chairman.
1		*MISSING DATA*

4. Counting the present year, what is the number of years of full-time teaching experience you have had?

MN=11.3 MED=8.0 SD=10.1 MD=1%

5. Counting the present year, how long have you been at this school?

MN=7.2 MED=4.0 SD=7.6 MD=1%

6. What is the highest level of education you have attained? (CHECK ONE)

0	(1)	High School
1	(2)	Some college
13	(3)	Bachelor's degree
46	(4)	Bachelor's degree plus some credit
12	(5)	Master's degree
28	(6)	Master's degree plus some credit
1	(7)	Doctor's degree
1		*MISSING DATA*

7. Have you taken any university (or evening or extension) courses in the last 12 months?

51	(1)	Yes
49	(2)	No If so, how many?____
1		*MISSING DATA*

8. How many conferences, workshops, or training sessions have you attended during the last 12 months, and how many were worthwhile?

	MN	*MED*	*SD*	*MD*
(# attended)	3.3	2.0	3.8	2%
(# worthwhile)	2.4	2.0	3.0	16%

9. How many of the total conferences, etc., were required, and of those how many were worthwhile?

	MN	*MED*	*SD*	*MD*
(# attended)	1.9	1.0	3.4	9%
(# worthwhile)	1.6	1.0	2.8	41%

10. How many hours are you required to spend in school in an average week? (Include time spent at required meetings, lunch, etc.)

MN=38.0 MED=38.0 SD=5.4 MD=10%

11. In addition to the time you are required to spend in school, how much additional time do you spend on school-related work (both at school and at home)?

	MN	*MED*	*SD*	*MD*
(hours per week)	12.5	10.0	8.0	1%

12. About how many days have you been absent from school so far during this school year?

MN=3.2 MED=2.0 SD=4.8 MD=1%

13. On the average, how much of your class time would you estimate you spend trying to secure and maintain order in the class?

	MN	*MED*	*SD*	*MD*
(% of class time)	5.0	2.0	7.9	2%

14. On the average, to what percentage of your students do you give a "failing" course grade?

MN=6.2% MED=5.0% SD=6.8% MD=2%

15. How much time do you spend in an average week this term on each of the following activities? (Please round to the nearest hour.)

HRS/WK

MN	*MED*	*SD*	*MD*	
22.7	25.0	7.1	1%	Teaching classes
2.6	1.0	3.3	1%	Monitoring study halls, hallways, cafeterias, etc.
0.8	0.0	1.8	1%	Formal counseling of students
2.3	2.0	2.5	1%	Talking individually with students outside class
1.0	1.0	1.4	1%	Staff meetings
2.2	0.0	5.7	1%	Coaching athletics
1.6	0.0	3.5	1%	Advising on other extra-curriculars
6.3	5.0	4.7	1%	Correcting papers and other paperwork
5.9	5.0	4.2	1%	Preparing for classes
1.2	0.0	3.6	1%	Other major activity (please specify) ____________
46.6	45.0	13.9	1%	*Total number of hours per week*

16. About how many times during this school year have you been in another teacher's classroom to observe or to help that teacher?

MN	*MED*	*SD*	*MD*	
2.8	0.0	12.8	5%	times in team teaching
2.7	0.0	7.5	5%	other times in my school
0.4	0.0	2.1	5%	times in another school
5.9	0.0	15.8	5%	*Total*

17. On the average, how many students do you have in your classes?

MN=26.8 MED=25.0 SD=9.3 MD=3%

18. How many classes are you teaching in each of the following areas at present?

MN	*MED*	*SD*	*MD*	
0.6	0.0	1.5	1%	Math classes
0.8	0.0	1.9	1%	English
0.7	0.0	1.7	1%	Social Sciences
0.5	0.0	1.6	1%	Natural & Physical Sciences
0.6	0.0	1.8	1%	Vocational
0.3	0.0	1.2	1%	Foreign Languages
0.4	0.0	1.3	1%	Commercial & Business
0.6	0.0	2.6	1%	Physical Education
0.5	0.0	2.3	1%	Fine Arts
0.3	0.0	1.8	1%	Other
5.3	5.0	3.3	1%	TOTAL CLASSES

19. Of the total number of classes you are presently teaching, how many are areas for which you feel well qualified to teach?

MN=5.1 MED=5.0 SD=3.3 MD=1.6

20. How many of the classes you teach contain students of quite similar abilities, because they have been grouped that way either intentionally or unintentionally?

MN	MED	SD	MD		
2.1	1.0	3.9	3	a.	of my classes are composed of students intentionally grouped by ability
1.6	0.0	3.2	4	b.	of my other classes are actually composed of students of very similar ability, even though they do not comprise a formal ability grouping.
3.6	4.0	4.1	4		*TOTAL*

21. About what percent of the students you teach this semester are boys in grades 10 through 12?

15	(1)	80 - 100%
12	(2)	60 - 79
38	(3)	40 - 59
13	(4)	20 - 39
8	(5)	1 - 19%
10	(6)	0% (SKIP TO QUESTION 23)
5		*MISSING DATA*

22. Of the boys in your classes who are in grades 10 through 12, roughly what percent would you estimate you have spoken to individually about each of the following topics this year?

MN	MED	SD	MD	
41.6%	30.0%	33.9%	16%	about academic performance
26.5%	10.0%	30.8%	16%	about occupational choice
30.3%	20.0%	31.0%	16%	about plans for post-high school education
15.9%	10.0%	22.1%	16%	about personal problems
21.2%	10.0%	27.2%	16%	about choice of program and courses
135.5%	105.0%	117.0%	16%	*TOTAL % SPOKEN TO INDIVIDUALLY*

23. In what proportion of your classes do you systematically gather written reactions from your students about your course content and/or teaching methods:

40	(1)	None
26	(2)	A few
7	(3)	About half
11	(4)	Most
15	(5)	All
2		MISSING DATA

24. How much do you like the students you teach in this school in comparison to students in most other schools?

0	(1)	Much less
3	(2)	Less
42	(3)	About the same
31	(4)	More
20	(5)	Much more
4		MISSING DATA

25. Taking all things into consideration, how satisfied are you with your present teaching position?

4	(1)	Very dissatisfied
5	(2)	Fairly dissatisfied
6	(3)	Slightly dissatisfied
6	(4)	Slightly satisfied
42	(5)	Fairly satisfied
36	(6)	Very satisfied
1		MISSING DATA

26. If you had it to do over again, would you enter teaching?

2	(1)	Definitely not
8	(2)	Probably not
11	(3)	Uncertain
35	(4)	Probably so
44	(5)	Definitely so
1		MISSING DATA

27. How much does your school give you a chance to use or apply your special skills and knowledge in your work?

2	(1)	Not at all
7	(2)	A little
19	(3)	Some
41	(4)	Quite a bit
31	(5)	Very much
1		MISSING DATA

28. This much opportunity to use or apply my skills and knowledge is:

13	(1)	Not enough
20	(2)	Not quite enough
64	(3)	Just about right
2	(4)	A little too much
0	(5)	Too much
1		MISSING DATA

29. How much does your school give you a chance to improve or acquire skills and knowledge?

8	(1)	Not at all
22	(2)	A little
34	(3)	Some
26	(4)	Quite a bit
8	(5)	Very much
1		MISSING DATA

30. This much opportunity to improve or acquire skills and knowledge is:

26	(1)	Not enough
28	(2)	Not quite enough
44	(3)	Just about right
0	(4)	A little too much
0	(5)	Too much
2		MISSING DATA

31. Think of the high school in which you would most like to be teaching, if you were not teaching in your present school. Suppose you were offered a position at that school similar to your present one. Which of the following would be the lowest salary offer that would induce you to leave your present position to accept the new one?

1	(1)	A 20% salary reduction
4	(2)	A 10% salary reduction
20	(3)	My present salary
13	(4)	A 10% salary increase
18	(5)	A 20% salary increase
8	(6)	A 30% salary increase
11	(7)	A 40% salary increase, or more
24	(8)	Under no circumstances involving salary would I leave
1		MISSING DATA

MANY THANKS FOR YOUR COOPERATION

FULL-TIME TEACHING

2. Are you a full-time teacher?
   (1) Yes
   (2) No--
   I teach ____% of a
   full-time load.

(percentage of a full-time load) *MN=65.4%* *MED=60.0%* *SD=13.1%* *MD=97%*

TAKING COURSES

7. Have you taken any university (or evening or extension) courses in the last 12 months?
   (1) Yes
   (2) No
   If so, how many?_____

(number of courses) *MN=3.5* *MED=2.0* *SD=3.8* *MD=65%*

BOYS' INTERVIEW TIME 1

1. Place Interviewer's Label Here

Student Code No. ________

Sample Book No. ________

Do not write in above space

2. Date taken: ____________________

3. Total Length of Interview: ________

4. PSU: ____________________

5. School Code: ____________

6. Your Interview No.: ______

INTRODUCTION

This interview is part of a study being carried out by The University of Michigan. We are talking to tenth grade boys all over the country. We're interested in how boys your age feel about a number of things -- your ideas about school, the future, and things that interest you.

Try to keep in mind that this is not a test -- you won't be graded in any way. In this interview we only want to know how you feel and your ideas on things, so we can learn more about boys your age.

Let me say one more thing: this interview is completely voluntary; if at any time you decide you don't want to go on with it, just let me know. Is it O.K. to begin?

IF YES: GO TO FIRST QUESTIONS.

IF NO: Well, do you have any special reasons for not wanting to participate?

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The University of Michigan

I12 How long have you lived here in (city or town)?

One year or less	7
2-5 years	13
6-10 years	16
11-15 years	36
16-20 years	7
All of my life	19
Missing data	1

I13a-c Now we'd like to learn about different schools you may have gone to:

	Grade schools	Junior high schools	Senior high schools
No junior highs; no senior highs	-	14	1
One	47	73	93
Two	28	11	6
Three	13	2	-
Four	6	-	-
Five	4	-	-
Six	1	-	-
Seven or more	1	-	-
Don't know; not ascertained; missing data	1	-	-

I14. Have you ever gone to a school that wasn't a public school?

17 YES   83 NO - SKIP TO QUESTION I15   0 *MISSING DATA*

I14a. What kind of school was that?

0	TRAINING SCHOOL (REFORMATORY)
15	PRIVATE OR PAROCHIAL SCHOOL OR ACADEMY
0	MILITARY SCHOOL OR ACADEMY
1	OTHER (SPECIFY): ______________________
83	*MISSING DATA*

I15. Did you go to nursery school?

11 YES   88 NO   1 *MISSING DATA*

I16. Did you go to kindergarten?

62 YES   38 NO   0 *MISSING DATA*

I18. Were you brought up mostly:

11	ON A FARM
12	IN THE COUNTRY, NOT ON A FARM
29	IN A TOWN
21	IN A SMALL CITY
27	IN A LARGE CITY
0	*MISSING DATA*

BOYS' INTERVIEW TIME 2

1.	Place Interviewer's Label Here	Sample Book No.: ___________ ____________________ Do not write in above space

2. Date Taken: ____________________

3. Total Length of Interview: ________

4. Subject Identification No.: ___________

5. PSU: ____________________

6. Your Interview No.: _______

INTRODUCTION

As you know, this interview is part of a long-range study carried out by the University of Michigan. You are one of the young men in our sample representing young men all over the country.

About a year and a half ago you participated in the first set of interviews. This second set comes after you have had a good deal more experience, and perhaps after a number of things have changed for you.

Many of the questions in this second interview are similar to the first interview -- but some of the answers may be different this time, because of the changes that have taken place in your life.

As you may remember from last time, this interview is not a test -- no one will be scoring you or giving you any sort of "grade." We only want to know how you feel and your ideas on things, so we can learn more about people your age.

We'll take a break during the interview whenever you wish. After we finish there is a shorter questionnaire I'd like you to fill out before leaving.

Just one more reminder: this interview is completely voluntary; if at any time you decide you don't want to go on with it, just let me know. Is it O.K. to begin?

IF YES: GO TO FIRST QUESTION

IF NO: Well, do you have any special reasons for deciding not to participate?

B5. How satisfied are you with the kinds of students who go to your high school? (HAND CARD B5 TO RESPONDENT) Pick the answer on this card that best describes how you feel about the students at your school.

19	1 VERY SATISFIED WITH THE KINDS OF STUDENTS WHO GO TO MY SCHOOL
46	2 QUITE SATISFIED WITH THE KINDS OF STUDENTS WHO GO TO MY SCHOOL
24	3 SOMEWHAT SATISFIED WITH THE KINDS OF STUDENTS WHO GO TO MY SCHOOL
5	4 NOT VERY SATISFIED WITH THE KINDS OF STUDENTS WHO GO TO MY SCHOOL
1	5 NOT AT ALL SATISFIED WITH THE KINDS OF STUDENTS WHO GO TO MY SCHOOL
5	*MISSING DATA*

Now I'd like to ask you a few questions about your school ability -- not how you are actually doing, but how well you could do in your course work.

B7. How close do you come to doing the best work you are able to do in school? (HAND CARD B7 TO RESPONDENT)

3	1 VERY CLOSE
22	2 QUITE CLOSE
45	3 SOMEWHAT CLOSE
23	4 NOT VERY CLOSE
2	5 NOT AT ALL CLOSE
5	*MISSING DATA*

B8. How hard do you think you work in school compared to the other students in your class? (HAND CARD B8 TO RESPONDENT)

2	1 MUCH HARDER
11	2 HARDER
59	3 ABOUT AVERAGE
21	4 LESS HARD
3	5 MUCH LESS HARD
5	*MISSING DATA*

B9. How satisfied are you with the way you're actually doing in school? (HAND CARD B9 TO RESPONDENT)

2	1 VERY SATISFIED
17	2 QUITE SATISFIED
38	3 SOMEWHAT SATISFIED
31	4 NOT VERY SATISFIED
6	5 NOT AT ALL SATISFIED
5	*MISSING DATA*

B10. About how many hours do you spend in an average week on all your homework including both in school and out of school?

No hours	2
1-4 hours	18
5-9 hours	31
10-14 hours	25
15-19 hours	11
20-24 hours	5
25 or more hours	4
Inappropriate; don't know; missing data	4

B16. What are the things you like about school?

	CODE CATEGORIES	1st Ment		2nd Ment		3rd Ment	
		T1	T2	T1	T2	T1	T2
	ENJOY LEARNING OR EDUCATIONAL PROCESS	31	26	23	19	10	5
	01. Learning; learning things, getting educated; discovering something new (specific aspects not given)	12	11	8	9	3	2
	02. The courses (classes) are good	3	2	3	-	-	-
	03. Like some (specific) classes, subjects, or courses	14	10	10	7	4	2
	TEACHERS	5	3	7	4	4	2
T2= 11.	11. Like the (particular) teachers; teachers in general are liked; respect the teachers; the teachers are nice	4	3	6	3	3	2
	12. Getting to know the teachers; becoming friendly with teachers; sharing things with teachers	-		-		-	
	SCHOOL AS PREPARATION FOR LATER BEHAVIOR	5	4	7	6	4	2
	21. Trains you for a job, career, occupation	-	-	2	-	-	-
	24. A necessity for getting ahead in life; getting anywhere; prepare for future	2	2	2	3	-	-
	STUDENT AND SCHOOL SOCIAL LIFE	46	46	33	27	16	8

		1st Ment		2nd Ment		3rd Ment	
		T1	T2	T1	T2	T1	T2
30.	School activities; things to do; particular kinds of school activities and events; attending athletic events (if N.A. whether plays)	15	7	9	6	5	2
T2= 31. 31.	School activities; the social life; social affairs (except dating)	-	25	2	12	-	3
32.	Being with kids, the people at school, being with friends	17		11		5	
34.	Dating; girls	-		-		-	
33.	Meeting (new and different) people; learning about them and learning to get along with them.	8	7	7	5	3	-
35.	Athletics; playing sports; being on a team	4	6	3	3	2	-
	SCHOOL AUTHORITY AND STUDENT FREEDOM	1	1	1	1	1	-
	SCHOOL PREFERRED TO OTHER ALTERNATIVES	4	5	3	3	2	1
50.	Avoids monotony, it's something to do; better than staying home	4	4	3	3	-	-
	SCHOOL PERSONNEL, POLICIES, AND FACILITIES	3	3	4	2	3	1
70.	NOTHING	2	4	-	-	-	-
71.	EVERYTHING	3	3	-	-	-	-
98.-00.	INAPPROPRIATE; NO FURTHER MENTIONS; MISSING DATA	-	6	22	38	60	80

B17. What are the things you really dislike about school?

	DISLIKE, NOT INTERESTED IN, DON'T ENJOY LEARNING OR EDUCATIONAL PROCESS	25	21	8	8
01.	School, classes, subjects are routine; boring; too easy; no challenge	-	2	-	-
03.	Some (general or particular) courses, subjects, or classes	9	6	2	2
07.	Homework; too much homework; heavy assignments; too many papers	11	8	3	2
08.	Finals, tests, quizzes; grading system	2	2	-	-

			1st Ment		2nd Ment	
			T1	T2	T1	T2
		DISLIKE, DO NOT ADMIRE OR RESPECT TEACHERS, TEACHING	11	13	9	8
T2= 10.	10.	Way classes taught, way teachers teach, way some teachers teach	2	3	2	2
	13.	Poor teachers, poor teaching; teachers not doing their job, don't know their subject	-		-	
	11.	Dislike (some) teachers; dislike teachers in general; can't get along with the teachers	6	7	3	3
	16.	Teachers unfair; don't treat the students right; discriminate	2	2	2	-
		DISLIKE STUDENTS AND SOCIAL LIFE	6	5	3	2
	30.	Bullies, hoods, rough types, troublemakers, ones who are down on school; dropouts	2	-	-	-
T2= 38.	35.	Kids; some of the kids, not ascertained who	2	2	-	-
	38.	Conduct of other students (N.A. who)	-		-	
		SCHOOL AUTHORITY AND STUDENT FREEDOM	6	9	4	6
T2= 40	40.	Too many regulations; too strict	2	5	-	3
	41.	Personal dislike of too much authority	-		-	
	43	Particular aspects of disciplinary system	4	2	3	-
	49.	Other; closed campus	-	2	-	-
		INCOMPATIBILITY WITH SCHOOL	10	10	3	2
	51.	Getting up in the morning	5	5	-	-
	53.	Not enough vacation; hours too long	2	-	-	-
		SCHOOL PERSONNEL, POLICIES, AND FACILITIES	12	13	7	7
	61.	Principal, vice-principal, other administrative officials	-	2	-	-
	63.	Scheduling [added at T2: "passing time"--not enough time between classes]	5	2	2	2
	64.	Physical facilities	2	2	-	-
	65.	Cafeteria; food; lunch	3	2	-	-
70.		NOTHING	28	22	-	-
71.		EVERYTHING; NOTHING IN PARTICULAR; JUST DON'T LIKE IT	-	1	-	-
98.-00.		INAPPROPRIATE; NO FURTHER MENTIONS; MISSING DATA	2	6	66	67

B18. What ways are there in your school for students to make their wishes known, make suggestions, or get changes made in the way the school is run?

	CODE CATEGORIES	1st Ment	2nd Ment
	INTERNAL	80	32
11.	Talk with teachers	4	4
12.	Talk with principal	8	8
13.	Talk with counselor(s)	6	4
14.	Student Council; student government	45	7
15.	Class officers; homeroom officers; class steering committee	4	2
16.	Suggestion box	6	3
17.	Petitions	3	2
18.	Use of student publications	3	2
19.	Power of clubs and other extracurricular groups; non-specific informal student groups, e.g., "organize the kids"	3	-
21.-25.	EXTERNAL	1	2
95.	OTHER GENERAL OR NOT ASCERTAINED WHAT	1	1
97.	NO WAYS	10	1
98.	DON'T KNOW; NOT ASCERTAINED	2	-
99.	INAPPROPRIATE BECAUSE R IS NOT IN SCHOOL	4	4
00.	INAPPROPRIATE; NO FURTHER MENTION	1	61

B18a. Have you yourself ever used any of these ways?

		FOR 1st MENT ABOVE	FOR 2nd MENT ABOVE
1.	Yes -- and it worked out very successfully; we (I) got just exactly the change(s) we (I) wanted	10	32
2.	Yes -- and it worked out somewhat; worked in some ways, not in others	3	2
3.	Yes -- but with no success; no changes resulted	7	-
5.	No - I've never used this method	61	-
8.	Don't know; not ascertained	2	-
9.	Inappropriate because R is not in school .	4	5
0.	Inappropriate because no mention in B18 . .	13	61

B19. If you had a reasonable gripe or complaint about some school rules or teacher demands, would you be **likely** to go to any of the people on this list for help?

	1. YES	2. NO	INAP.
A TEACHER	36	59	4
A COACH	18	77	4
A GUIDANCE COUNSELOR	55	.41	4
THE PRINCIPAL OR AN ASSISTANT PRINCIPAL	46	49	4

B19a. Would you be likely to go to anyone else if you had a complaint?

CODE CATEGORIES

1. Parent(s)	8
2. Friend(s)	2
3. Formal Student Group; Student Council; Student Judiciary	4
4. Other student group - not formal or not ascertained whether formal	1
5. Superintendent of Schools; School Board	6
6. Other out-of-school person(s) or group(s)	1
7. Other school person	2
8. Don't know	1
9. Inappropriate because R is not in school	4
0. No further mention; no one else; no one	72

B20. If you could change your school in some way, what would you do to make it a better place for students?

CODE CATEGORIES

CLASSES	10	6
12. Greater variety	3	-
18. Not so crowded; more, larger rooms	2	-
TEACHERS AND TEACHING, COUNSELORS AND OTHER OFFICIALS	7	4
20. Better teachers	4	2

SCHOOL AND SOCIAL ACTIVITIES	3	3
35. More activities (not specified); less monotony	2	-
SCHOOL AUTHORITY AND STUDENT FREEDOM	19	6
41. Less school authority; eliminate closed campus	6	2
42. More (better) school authority	2	-
44. More student freedom	7	2
48. Change the way the school is run; change some of the rules (general)	2	-
49. Other	2	-
PHYSICAL FACILITIES	21	7
50. Better cafeteria and food; food prices . .	3	-
51. More (better) gyms and athletic facilities.	2	-
57. Student lounge	2	-
58. More (better) facilities (not specified); rebuild whole place; halls; air conditioning; other improvements in physical plan	9	2
59. Other	2	-
72. Size of school; split or combine junior and senior highs	2	-
STUDENT BODY COMPOSITION	3	1
SCHOOL PROGRAMS AND SCHEDULES	8	4
80. Scheduling; "passing time"--time between classes	4	2
81. Shorter hours; more vacation and holidays . .	3	-
NOTHING	16	-
OTHER (GENERAL)	2	1
INAPPROPRIATE; NO FURTHER MENTIONS; MISSING DATA .	11	68

B21. How would you describe the actual buildings and facilities of your school? READ RESPONSES

11	POOR
29	ADEQUATE
36	GOOD
18	EXCELLENT
4	MISSING DATA

B23. Do you feel that there is any adult in the school (like a teacher, principal, or counselor) who really knows what your program of studies is and who cares about your getting the education that will be best for you?

77	YES: Who? (TEACHER, COACH, COUNSELOR, ETC.) (See below)
17	NO
8	*MISSING DATA*

	1st Ment	2nd Ment
Teacher	29	3
Counselor	35	6
Principal	7	1
Assistant Principal, Vice-Principal,	2	1
Coach	4	2

Now we are interested in finding out about how you feel about the counselor(s) in this school.

B24. How much do you like the counselor or counselors you have had in this school? (HAND R CARD B24)

I like the counselor(s):

22	Very much
31	Quite a bit
26	Somewhat
8	Not very much
3	Not at all
10	*MISSING DATA*

R HAS NOT SEEN A COUNSELOR AND HAS NO OPINION: SKIP TO B26, page 10
NO COUNSELORS IN R'S SCHOOL: SKIP TO C1, page 13

B25. Do you trust your counselor to keep confidential the things you discuss with him (her)? (SHOW R CARD B25)

I trust the counselor(s):

42	Very much
29	Quite a bit
13	Somewhat
3	Not very much
2	Not at all
11	*MISSING DATA*

B26. Have you seen a counselor for any reason this year?

24 NO - SKIP TO QUESTION B36, PAGE 12
72 YES
4 *MISSING DATA*

B27. How many times during the last year have you seen a counselor for each of the following reasons?

B27a. Because all students are routinely required to go at certain times
39 Once or more 57 None 4 *MISSING DATA*

B27b. Because the counselor asked specifically to see you for some special reason
35 Once or more 60 None .5 *MISSING DATA*

B27c. Because a teacher, principal, or other school official made you go
5 Once or more 88 None 5 *MISSING DATA*

B27d. Because you chose to go
64 Once or more 41 None 5 *MISSING DATA*

B27e. Other (SPECIFY) ______________________
4 Once or more 67 None 28 *MISSING DATA*

(INTERVIEWER FILL IN): ______________________ TOTAL TIMES

No times (T2 ALSO MEANS R HAS NEVER SEEN A COUNSELOR; NO COUNSELORS IN R's SCHOOL)	24
One time	15
Two times	16
Three or four times	21
Five to seven times	13
Eight to ten times	4
Eleven to fifteen times	2
More than fifteen times	1
Inappropriate because R is not in school . . .	4

B28. What do you think is the best estimate of the total amount of time you have spent talking individually to a counselor during this school year, either in or out of the counselor's office?

Mean = 85 minutes Standard Deviation = 140 minutes

Now I'd like to ask you how this time was spent. (HAND CARD B29-35)

INTERVIEWER: READ ACROSS ROWS

(INTERVIEWER: PART C SHOULD BE ASKED REGARDLESS OF ANSWER TO PART A)

TOPIC	a. MINUTES	b. How helpful was this? 1 Extremely helpful 2 Quite helpful 3 Somewhat helpful 4 A little helpful 5 Not at all helpful		c. Would you have preferred more or less of this type of counseling? 1 Much more 2 A little more 3 About right 4 A little less 5 Much less	
B29. How much time was spent choosing what courses to take or what program to be in?	___min. 61 SOME 34 NONE 5 MD	12 27 14 6 3 39	1 2 3 4 5 MD	9 17 36 3 2 26	1 2 3 4 5 MD
B30. How much time was spent discussing problems you have or have had with course work?	38 SOME 59 NONE 5 MD	5 13 10 5 3 64	1 2 3 4 5 MD	6 12 30 3 2 47	1 2 3 4 5 MD
B31. How much time was spent discussing any trouble you may have gotten into in school?	11 SOME 84 NONE 5 MD	2 2 3 2 1 89	1 2 3 4 5 MD	2 3 28 2 5 61	1 2 3 4 5 MD
B32. How much time was spent discussing military plans or obligations?	9 SOME 85 NONE 5 MD	1 3 3 1 1 91	1 2 3 4 5 MD	4 9 25 1 3 59	1 2 3 4 5 MD
B33. How much time was spent discussing plans for your education or training after high school?	43 SOME 52 NONE 5 MD	9 16 11 4 2 57	1 2 3 4 5 MD	12 20 24 1 1 43	1 2 3 4 5 MD
B34. How much time was spent discussing your career or job choice?	32 SOME 63 NONE 6 MD	5 11 9 4 2 69	1 2 3 4 5 MD	11 14 25 1 1 49	1 2 3 4 5 MD
B35. How much time was spent discussing personal problems?	14 SOME 82 NONE 6 MD	2 3 4 1 1 88	1 2 3 4 5 MD	3 5 30 2 3 59	1 2 3 4 5 MD

B36. Thinking about the counselors in your school, how comfortable or uncomfortable would you feel about asking them for help with the following types of problems?

If you had a personal problem (for example a serious problem with your family, classmates, or teachers): SHOW R CARD B36

9	1	I would be very comfortable talking about this
19	2	I would be quite comfortable talking about this
32	3	I would be somewhat comfortable talking about this
20	4	I would be quite uncomfortable talking about this
11	5	I would be very uncomfortable talking about this
1	6	NO OPINION
9		*MISSING DATA*

B37. If you were uncertain about your educational plans or career plans: SHOW R CARD B37

39	1	I would be very comfortable talking about this
34	2	I would be quite comfortable talking about this
15	3	I would be somewhat comfortable talking about this
3	4	I would be quite uncomfortable talking about this
2	5	I would be very uncomfortable talking about this
0	6	NO OPINION
9		*MISSING DATA*

(HAND CARD G1-G4 TO RESPONDENT) In answering these questions, I'd like you to use the answers on this card; I'll show you how this works in just a moment.

G1. The first questions are about being independent--that is, having a lot of freedom to decide what you will do; and not having people watching over you and telling you what to do.

SCHOOL

G1b. How much does your school give you a chance to be independent? (Pick your answer from Part B.)

7	1	VERY MUCH
35	2	QUITE A BIT
34	3	SOME
16	4	A LITTLE
3	5	NOT AT ALL
6		*MISSING DATA*

G1c. Now, how does the amount of independence you have in school fit in with what you want--is it just about right, or not enough, or too much? (Pick your answer from Part C.)

0	1	TOO MUCH, COMPARED WITH WHAT I WANT
2	2	A LITTLE TOO MUCH
55	3	JUST ABOUT RIGHT
29	4	NOT QUITE ENOUGH
8	5	NOT ENOUGH, COMPARED WITH WHAT I WANT
6		*MISSING DATA*

G2. The next questions are about spending time with friends--being together and enjoying each other's company.

SCHOOL

G2b. How much does your school give you a chance to spend time with friends? (IF NECESSARY, pick your answer from Part B.)

9	1 VERY MUCH
37	2 QUITE A BIT
29	3 SOME
17	4 A LITTLE
1	5 NOT AT ALL
6	*MISSING DATA*

G2c. How does this (the chance for spending time with friends) fit in with what you want?

1	1 TOO MUCH, COMPARED WITH WHAT I WANT
2	2 A LITTLE TOO MUCH
61	3 JUST ABOUT RIGHT
26	4 NOT QUITE ENOUGH
5	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
6	*MISSING DATA*

G3. The next questions are about achieving success--doing things that are challenging; winning in competition with others; trying to reach difficult goals.

SCHOOL

G3b. How much does your school give you a chance to do things where you might win or achieve success?

21	1 VERY MUCH
47	2 QUITE A BIT
20	3 SOME
7	4 A LITTLE
1	5 NOT AT ALL
6	*MISSING DATA*

G3c. How does this (the chance to do things where you might win or achieve) fit in with what you want?

1	1 TOO MUCH, COMPARED WITH WHAT I WANT
3	2 A LITTLE TOO MUCH
73	3 JUST ABOUT RIGHT
14	4 NOT QUITE ENOUGH
3	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
6	*MISSING DATA*

G4. The next questions are about getting to know adults well--having a chance to talk to them privately and get their opinions or advice.

SCHOOL

G4b. How much does the school give you a chance for getting to know adults well--like teachers, for example?

7	1 VERY MUCH
28	2 QUITE A BIT
33	3 SOME
24	4 A LITTLE
4	5 NOT AT ALL
6	*MISSING DATA*

G4c. How does this (the chance for getting to know adults well) fit in with what you want?

1	1 TOO MUCH, COMPARED WITH WHAT I WANT
3	2 A LITTLE TOO MUCH
62	3 JUST ABOUT RIGHT
26	4 NOT QUITE ENOUGH
3	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
6	*MISSING DATA*

G5. People feel differently about doing things where they risk failing.

SCHOOL

G5b. How much does your school give you a chance to do things where you might fail? (Pick your answer from Part B.)

11	1 VERY MUCH
32	2 QUITE A BIT
33	3 SOME
16	4 A LITTLE
3	5 NOT AT ALL
6	*MISSING DATA*

G5c. Now can you tell me how much your school actually requires you to do things where you might fail? (Pick your answer from Part C.)

4	1 VERY MUCH
18	2 QUITE A BIT
32	3 SOME
27	4 A LITTLE
14	5 NOT AT ALL
6	*MISSING DATA*

G5d. How does this (the opportunity or requirement for doing things where you might fail) fit in with what you want? (Pick your answer from Part D.)

4	1 TOO MUCH, COMPARED WITH WHAT I WANT
16	2 A LITTLE TOO MUCH
62	3 JUST ABOUT RIGHT
10	4 NOT QUITE ENOUGH
2	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
6	*MISSING DATA*

G6. The next questions are about self-improvement--learning new things; doing better than you have been able to do in the past.

SCHOOL

G6b. How much does your school give you a chance for improving yourself?

22	1 VERY MUCH
49	2 QUITE A BIT
19	3 SOME
4	4 A LITTLE
1	5 NOT AT ALL
6	*MISSING DATA*

G6c. How much does your school actually require you to improve yourself?

7	1 VERY MUCH
25	2 QUITE A BIT
38	3 SOME
17	4 A LITTLE
7	5 NOT AT ALL
6	*MISSING DATA*

G6d. How does this (the opportunity or requirement for improving yourself) fit in with what you want?

1	1 TOO MUCH, COMPARED WITH WHAT I WANT
4	2 A LITTLE TOO MUCH
64	3 JUST ABOUT RIGHT
23	4 NOT QUITE ENOUGH
3	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
6	*MISSING DATA*

G7. The next questions are just a bit different. Instead of asking about improving yourself, these questions are about doing things you're already good at--this means doing the things you have learned how to do well and enjoy doing; being able to use the skills and abilities that you already have.

SCHOOL

G7b. How much does your school give you a chance for doing things you're already good at?

11	1 VERY MUCH
36	2 QUITE A BIT
30	3 SOME
15	4 A LITTLE
3	5 NOT AT ALL
6	*MISSING DATA*

G7c. How much does your school actually require you to do things you're already good at?

3	1 VERY MUCH
13	2 QUITE A BIT
35	3 SOME
29	4 A LITTLE
13	5 NOT AT ALL
6	*MISSING DATA*

G7d. How does this (the opportunity or requirement for doing things you're already good at) fit in with what you want?

1	1 TOO MUCH, COMPARED WITH WHAT I WANT
2	2 A LITTLE TOO MUCH
58	3 JUST ABOUT RIGHT
28	4 NOT QUITE ENOUGH
6	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
6	*MISSING DATA*

The first questions are about intelligence--having a quick mind; catching on to things fast.

SCHOOL

G8c. How much does your school give you a chance for using a lot of intelligence? (Pick your answer from Part C.)

29	1 VERY MUCH
47	2 QUITE A BIT
15	3 SOME
4	4 A LITTLE
0	5 NOT AT ALL
5	*MISSING DATA*

G8d. How much does your school actually require you to use a lot of intelligence? (Pick your answer from Part D.)

12	1 VERY MUCH
39	2 QUITE A BIT
31	3 SOME
11	4 A LITTLE
3	5 NOT AT ALL
5	*MISSING DATA*

G8e. How does this (the opportunity or requirement for using a lot of intelligence in school) fit in with what you want? (Pick your answer from Part E.)

1	1 TOO MUCH, COMPARED WITH WHAT I WANT
7	2 A LITTLE TOO MUCH
68	3 JUST ABOUT RIGHT
17	4 NOT QUITE ENOUGH
2	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
5	*MISSING DATA*

G9. The next questions are about being a good reader--reading quickly without making mistakes; reading difficult books.

SCHOOL

G9c. How much does your school give you a chance to read?

22	1 VERY MUCH
49	2 QUITE A BIT
18	3 SOME
7	4 A LITTLE
0	5 NOT AT ALL
6	*MISSING DATA*

G9d. How much does your school actually require you to read?

8	1 VERY MUCH
39	2 QUITE A BIT
33	3 SOME
14	4 A LITTLE
1	5 NOT AT ALL
5	*MISSING DATA*

G9e. How does this (the opportunity or requirement for reading in school) fit in with what you want?

3	1 TOO MUCH, COMPARED WITH WHAT I WANT
17	2 A LITTLE TOO MUCH
55	3 JUST ABOUT RIGHT
16	4 NOT QUITE ENOUGH
4	5 NOT ENOUGH, COMPARED WITH WHAT I WANT
5	*MISSING DATA*

IF R HAS NO JOB, SKIP TO PAGE 56, QUESTION G19

R IS NOT IN SCHOOL: SKIP TO QUESTION I15, pg. 68

R IS IN SCHOOL: GO ON TO QUESTION I13, this page

I13. Have you changed high schools since we last talked, 18 months ago?

90	NO: GO TO QUESTION I14, page 68
6	YES
4	*MISSING DATA*

I14. What program or type of curriculum are you in at school?
(IF R IS UNCERTAIN, READ THE RESPONSE CATEGORIES)

9	Vocational -- Area: ______________________
42	College Preparatory
5	Commercial or Business
32	General
3	Agricultural
2	Other (SPECIFY) ______________________
7	*MISSING DATA*

I14a. Are you happy in the school program you are in, or do you wish you were in some other one?

87	R HAPPY WHERE HE IS - SKIP TO I14 d
7	R WISHES HE WERE IN ANOTHER ONE
7	*MISSING DATA*

I14d. Do you feel that you are free to change programs if/when you want to?

68 YES   26 NO   7 *MISSING DATA*

I15. (ASK EVERYONE) : Have you ever been in a work-study program (that is, a program where you work on a job as a part of your schooling)?

4 YES   96 NO   1 *MISSING DATA*

BOYS' QUESTIONNAIRE TIME 2

Your code number: ________

SURVEY RESEARCH CENTER
UNIVERSITY OF MICHIGAN

YOUTH IN TRANSITION

A Nationwide Survey of Young Men

This questionnaire is part of a nationwide study of more than three thousand boys throughout the United States.

All your answers in this questionnaire will be kept strictly confidential. No one will ever see them except the research staff at The University of Michigan.

It is very important that you answer the questions as accurately as you can. The success of the study depends on this.

INSTRUCTIONS

1. Please answer all questions in order.
2. Most questions need only a check mark (✓) to answer.
3. Please disregard the numbers in parentheses. They are to help us punch your answers onto IBM cards.
4. This is not a test, but you should work as quickly as you can.
5. When you have finished the questionnaire, please place it in the envelope provided, seal the envelope, and give it to the interviewer. THE SEALED ENVELOPE CONTAINING YOUR QUESTIONNAIRE WILL BE SENT UNOPENED TO THE RESEARCH STAFF AT ANN ARBOR. NO ONE ELSE WILL SEE YOUR ANSWERS.
6. Most young men find this questionnaire very interesting and enjoyable to fill out; we hope you will too. Thank you again for being an important part of this research project.

PART F.

1. Are you presently enrolled in school?

94	(1) YES: Continue with question 2
5	(2) NO: Skip to question 1, page 56
1	*MISSING DATA*

This set of questions is about your school, your teachers, your classes, and the way you feel about them.

First we'd like to know which people have a lot to say about how things are run in your school. We'd like to know what you think, even if you're not sure of all your answers.

	Little or no influence (1)	Some influence. (2)	Moderate influence (3)	Considerable influence (4)	A great deal of influence (5)	*MISSING DATA*
2. In general, how much say or influence do you feel each of the following has on *how your school is run?* (CHECK ONE BOX ON EACH LINE)						
a. The principal	6	7	8	22	51	6
b. The teachers	6	13	27	38	12	7
c. The students	19	30	24	14	6	8
d. Parents of students	18	30	23	14	8	8
3. How much say or influence do you feel each of the following has in *making up and carrying out rules about student conduct?* (CHECK ONE BOX ON EACH LINE)						
a. The principal	3	5	7	20	59	7
b. The teachers	2	8	20	40	24	7
c. The students	22	25	27	12	7	7
d. Parents of students	21	26	22	15	8	8
4. How much say or influence do you feel each of the following has over *student clubs and social events* at your school? (CHECK ONE BOX ON EACH LINE)						
a. The principal	5	8	16	26	39	7
b. The teachers	4	13	27	33	16	7
c. The students	6	13	25	27	23	7
d. Parents of students	25	27	22	12	7	7

Now that we've asked about the way things actually seem to be at your school, we'd like to know how you think they *should* be. So the next questions are about how you'd like to see things run *ideally*.

	Little or no influence (1)	Some influence (2)	Moderate influence (3)	Considerable influence (4)	A great deal of influence (5)	*MISSING DATA*
5. Ideally, how much say or influence do you feel each of the following *should have* on *how your school is run*? (CHECK ONE BOX ON EACH LINE)						
a. The principal	4	6	15	30	40	6
b. The teachers	2	9	27	39	16	8
c. The students	3	12	32	29	17	7
d. Parents of students	10	22	29	19	12	8
6. Ideally, how much say or influence do you feel each of the following *should have* in *making up and carrying out rules about student conduct*? (CHECK ONE BOX ON EACH LINE)						
a. The principal	3	5	15	28	42	7
b. The teachers	3	8	25	34	24	7
c. The students	5	12	30	26	20	8
d. Parents of students	12	23	25	19	14	8
7. Ideally, how much say or influence do you feel each of the following *should have* over *student clubs and social events* at your school? (CHECK ONE BOX ON EACH LINE)						
a. The principal	8	13	26	24	21	7
b. The teachers	7	15	30	27	14	7
c. The students	2	7	15	31	38	7
d. Parents of students	17	23	27	16	10	7

8. Suppose your school were run just the way you would like it to be ideally -- do you think your teachers would like it much?

8	(1)	They would like it much better than the way things are now.
20	(2)	A little better
28	(3)	About the same
26	(4)	A little less
12	(5)	They would like it much less than the way things are now.
6		*MISSING DATA*

9. How often do you do the things your teachers suggest or want you to do?

3	(1)	Almost never
7	(2)	Seldom
27	(3)	Sometimes
44	(4)	Most of the time
14	(5)	Just about always
6		*MISSING DATA*

You've just checked how often you do what teachers suggest or want; now we would like to know which reasons are important for doing so.

10. Please read all five of the reasons below, then mark one box next to each to show how important it is as a reason for your doing the things your teachers suggest or want you to do.

HOW IMPORTANT IS THIS IN GETTING YOU TO DO WHAT YOUR TEACHERS WANT?

	Not at all important (1)	Slightly important (2)	Somewhat important (3)	Quite important (4)	Very important (5)	*MISSING DATA*
a. You respect your teachers personally and thus want to be respected and liked by them. . .	3	8	23	36	25	6
b. Your teachers can reward you with good grades, recommendations, etc..	5	14	27	32	15	6
c. You feel that you should respect the authority which your teachers have	3	9	23	37	22	7
d. Your teachers can punish you or make things difficult for you.	11	23	31	20	8	7
e. You feel your teachers have more knowledge and better judgment in certain areas than you do . .	2	9	21	37	26	6

11. Now please think of a teacher you have had this year who has been most helpful to you (that is, the one who has had the best effect on you).

Check below the subject area that you are taking (have taken) from this teacher:

19	(1) English	4	(5) Foreign language
13	(2) Math	12	(6) Vocational or commercial
7	(3) Natural science	9	(7) Physical education
15	(4) Social science	4	(8) Other: please write below
		18	*MISSING DATA*

Still thinking of this same teacher who has been most helpful to you, we would like to know which reasons are (were) important in getting you to do what that teacher suggests or wants.

12. Please read all five of the reasons below, then mark one box next to each to show how important it is (was) as a reason for your doing the things this teacher suggests or wants you to do.

HOW IMPORTANT IS THIS IN GETTING YOU TO DO WHAT YOUR MOST HELPFUL TEACHER SUGGESTS OR WANTS:

	Not at all important (1)	Slightly important (2)	Somewhat important (3)	Quite important (4)	Very important (5)	*MISSING DATA*
a. You respect this teacher personally and thus want to be respected and liked by him (her)	2	5	16	34	37	7
b. This teacher can reward you with good grades, recommendations, etc	8	16	25	28	17	7
c. You feel that you should respect the authority which this teacher has.	2	7	18	36	31	7
d. This teacher can punish you or make things difficult for you	15	24	27	18	9	7
e. You feel that this teacher has more knowledge and better judgment in certain areas than you do	1	6	13	33	40	7

The next questions are about some attitudes at your school.

13. In comparison with other high schools, what kind of a reputation does your high school have?

6	(1)	A poor reputation
17	(2)	A fair reputation
30	(3)	A good reputation
29	(4)	A very good reputation
12	(5)	An excellent reputation
6		*MISSING DATA*

14. How much competition for grades is there among students at your school?

2	(1)	None
10	(2)	A little
29	(3)	Some
42	(4)	Quite a bit
11	(5)	A great deal
6		*MISSING DATA*

15. How important is it in your school to be on the honor roll?

5	(1)	Not at all important
18	(2)	A little important
38	(3)	Somewhat important
25	(4)	Quite important
8	(5)	Very important
6		*MISSING DATA*

16. How do you think most of the students in your classes would feel if you cheated on a test?

2	(1)	They would like it very much
4	(2)	They would like it
53	(3)	They would not care
28	(4)	They would dislike it
8	(5)	They would dislike it very much
6		*MISSING DATA*

17. How do you think most of the students in your classes would feel if you were rude to your teachers?

3	(1)	They would like it very much
9	(2)	They would like it
42	(3)	They would not care
35	(4)	They would dislike it
5	(5)	They would dislike it very much
6		*MISSING DATA*

18. How do you think most of the students in your classes would feel if you goofed off in class so that others couldn't work?

2	(1)	They would like it very much
7	(2)	They would like it
26	(3)	They would not care
49	(4)	They would dislike it
10	(5)	They would dislike it very much
6		*MISSING DATA*

19. How do you think most of the students in your classes would feel if you copied assignments from other students?

1	(1)	They would like it very much
3	(2)	They would like it
63	(3)	They would not care
24	(4)	They would dislike it
3	(5)	They would dislike it very much
6		*MISSING DATA*

20. How do you think most of the students in your classes would feel if you intentionally did things to make your teachers angry?

3	(1)	They would like it very much
11	(2)	They would like it
33	(3)	They would not care
41	(4)	They would dislike it
6	(5)	They would dislike it very much
6		*MISSING DATA*

21. How important is each of the following for being looked up to or having high status in your school?

	IMPORTANCE FOR HIGH STATUS					
	No importance (1)	Little importance (2)	Moderate importance (3)	Great importance (4)	Very great importance (5)	*MISSING DATA*
A. Coming from the right family.	*15*	*23*	*32*	*12*	*11*	*6*
B. Being a leader in student activities. . .	*3*	*10*	*29*	*35*	*16*	*7*
C. Having a nice car	*10*	*24*	*34*	*17*	*7*	*7*
D. Getting high grades	*3*	*10*	*34*	*31*	*16*	*7*
E. Being a good athlete.	*2*	*6*	*26*	*37*	*22*	*7*
F. Knowing a lot about intellectual matters.	*4*	*16*	*40*	*23*	*10*	*7*

22. How often is each of the following true at your school?

	Never (1)	Seldom (2)	Sometimes (3)	Often (4)	Almost always (5)	*MISSING DATA*
A. If a student thinks out a report carefully, teachers will give him a good grade, even if they don't agree with him.	*2*	*10*	*31*	*37*	*13*	*6*
B. Teachers here encourage students to value knowledge for its own sake, rather than just for grades.	*1*	*10*	*29*	*38*	*15*	*6*
C. At this school students are encouraged to undertake independent projects.	*2*	*13*	*41*	*30*	*7*	*7*
D. Teachers do nothing more than repeat what's in the textbook in many classes here. . . .	*3*	*25*	*40*	*22*	*5*	*6*
E. Teachers treat questions in class as if the students were criticizing them personally .	*7*	*36*	*35*	*12*	*2*	*7*
F. Clear and careful thinking are most important in getting a good grade on reports, papers, discussions, and tests.	*1*	*6*	*22*	*43*	*21*	*7*
G. In this school teachers adjust assignments and projects to the individual student's interests	*4*	*29*	*38*	*17*	*5*	*7*

	Almost always (1)	Often (2)	Sometimes (3)	Seldom (4)	Never (5)	MISSING DATA
23. How often do students in your school tend to talk about the grades they get and compare them to other people's grades?	16	45	26	6	1	6
24. How often are test grades or course grades announced in class or posted where many students can see them?	4	19	32	28	11	6
25. How often are teachers at this school friendly and easy to approach?	12	44	30	7	1	7
26. How often do your teachers like students to exchange opinions and ideas in class ?	15	41	29	8	1	7
27. How often do teachers at this school lose their temper ?	2	13	39	38	2	7
28. How often can your teachers get the best from students without nagging or threatening?	6	37	39	10	1	7
29. How often do teachers at this school "talk down" to students, and act as if students don't know anything?.	3	13	38	35	5	7
30. How often do you think teachers trust students to be honest and conscientious?	6	36	39	11	2	7
31. How often do teachers treat students with as much respect as they would treat an adult?	7	31	36	17	3	7
32. How often are your teachers willing to listen to problems and help find solutions?	12	39	33	9	1	7
33. How often do teachers at this school like students to get together and help each other with homework?	5	18	41	25	4	7
34. How often do teachers here encourage extra effort from students?	18	43	26	5	1	7
35. How often do teachers at this school ask students to work together on things in groups or as a team?	5	23	48	17	1	7
36. How often do you feel that the school work you are assigned is meaningful and important?	12	36	37	7	2	7

37. Do many of your teachers seem to take a personal interest in you?

4	(1)	All of my teachers take a personal interest in me
23	(2)	Most of my teachers take a personal interest in me
36	(3)	Some of my teachers take a personal interest in me
25	(4)	A few of my teachers take a personal interest in me
6	(5)	None of my teachers take a personal interest in me
6		*MISSING DATA*

38. How often do you talk privately with any of your teachers *about school work* (even if it is just for a few minutes)?

9	(1)	Nearly every day
24	(2)	About once or twice a week
22	(3)	About once or twice a month
29	(4)	Once or twice a term
11	(5)	Never
6		*MISSING DATA*

39. How often do you have a private talk with any of your teachers about *other things* than school work?

10	(1)	Nearly every day
14	(2)	About once or twice a week
17	(3)	About once or twice a month
26	(4)	Once or twice a term
27	(5)	Never
6		*MISSING DATA*

40. When you talk privately with a teacher, how often is it the teacher's idea to have the talk?

6	(1)	It is always the teacher's idea
13	(2)	It is usually the teacher's idea
26	(3)	It is the teacher's idea about half of the time
38	(4)	It is usually my idea
9	(5)	It is always my idea
8		*MISSING DATA*

41. Do most of your teachers give you positive suggestions about your school work, or just make negative criticisms?

3	(1)	They almost always just make negative criticisms
7	(2)	They usually just make negative criticisms
41	(3)	They sometimes give positive suggestions, sometimes negative criticisms
35	(4)	They usually give positive suggestions
8	(5)	They almost always make positive suggestions
6		*MISSING DATA*

42. How often do the students in your school get a chance to work with teachers in planning what their school work will be--like what topics will be studied, or how they will be studied?

4	(1)	Almost always
17	(2)	Often
38	(3)	Sometimes
27	(4)	Seldom
8	(5)	Never
6		*MISSING DATA*

43. Would you like a chance to do *more* of this?

82	(1)	Yes
11	(2)	No
7		*MISSING DATA*

44. Sometimes students get a chance to make their own choice of assignments or topics in their school work--like picking out a book for a report or selecting a project for a class. How often do you get a chance to make your own choices like that?

8	(1)	Almost always
28	(2)	Often
41	(3)	Sometimes
15	(4)	Seldom
2	(5)	Never
6		*MISSING DATA*

45. Would you like a chance to do more of this?

82	(1)	Yes
11	(2)	No
7		*MISSING DATA*

46. How many teachers here seem excited about their work, and really seem to enjoy teaching?

8	(1)	Nearly all of the teachers
37	(2)	Most of them
32	(3)	Some of them
14	(4)	A few of them
1	(5)	None of them
7		*MISSING DATA*

47. How many teachers at this school really know their subjects very well?

22	(1)	Nearly all of the teachers
48	(2)	Most of them
17	(3)	Some of them
6	(4)	A few of them
0	(5)	None of them
7		*MISSING DATA*

48. How much do the teachers seem to like most of the students in your school?

8	(1)	Very much
48	(2)	Quite a bit
32	(3)	Some
5	(4)	A little
0	(5)	Not at all
7		*MISSING DATA*

49. How interesting are most of your courses *to you*?

6	(1)	Very exciting and stimulating
36	(2)	Quite interesting
39	(3)	Fairly interesting
10	(4)	Slightly dull
2	(5)	Very dull
7		*MISSING DATA*

50. How often are you interested enough to do more reading or other work than the course requires?

5	(1)	Most of the time
16	(2)	Often
49	(3)	Sometimes
20	(4)	Hardly ever
3	(5)	Never
7		*MISSING DATA*

51. Outside of homework how often do you have discussions with friends about ideas that come up in your courses?

10	(1)	Several times a day
26	(2)	About once a day
32	(3)	About once or twice a week
20	(4)	About once or twice a month
6	(5)	Never
7		*MISSING DATA*

52. How often do you find that your friends encourage you to do things which your teachers wouldn't like?

8	(1)	Never
36	(2)	Seldom
40	(3)	Sometimes
9	(4)	Often
1	(5)	Almost always
7		*MISSING DATA*

53. How important do you think the things you are learning in school are going to be for your later life?

30	(1)	Very important
34	(2)	Quite important
22	(3)	Fairly important
7	(4)	Slightly important
1	(5)	Not at all important
7		*MISSING DATA*

The next questions ask for your own feelings about school. Please read each of the statements in the list. Then go to the four boxes on the right and put a check in the box that tells how you feel about the thing on the list.
(CHECK ONE BOX ON EACH LINE)

I feel
this way:

		Very much (1)	Pretty much (2)	A little (3)	Not at all (4)	*MISSING DATA*
54.	Instead of being in this school, I wish I were out working.	3	6	26	59	6
55.	Maybe I won't get anything out of school but I have nothing to lose	8	15	26	45	6
56.	I feel satisfied with school because I learn more about things I want to know about	27	44	18	4	7
57.	Education has a high value because knowing a lot is important to me	43	36	13	2	7
58.	I think this school is a real chance for me; it can make a real difference in my life.	39	36	16	3	6
59.	Even if I could get a very good job at present, I'd still choose to stay in school and get my education	56	25	10	3	6
60.	I have put a great deal of myself into some things at school because they have special meaning or interest for me	30	40	21	3	7
61.	I enjoy school because it gives me a chance to learn many interesting things.	28	42	21	3	7
62.	There is no real value in getting an education unless it helps you get ahead in life	17	29	26	22	7
63.	School gives me a chance to be with people my own age and do a lot of things that are fun.	36	40	15	2	7
64.	I think school is important, not only for the practical value, but because learning itself is very worthwhile	40	40	12	1	7
65.	A high school diploma is the only way to get ahead.	41	33	15	5	7
66.	School is very boring for me, and I'm not learning what I feel is important	6	12	37	38	6

I feel this way:

		Very much (1)	Pretty much (2)	A little (3)	Not at all (4)	*MISSING DATA*
67.	If I could get the job I wanted, I'd quit school without hesitating.	5	7	17	65	6
68.	A real education comes from your own experience and not from the things you learn in school	8	20	46	19	7
69.	All people should have at least a high school education	61	24	7	2	7
70.	I enjoy being in school because I feel I'm doing something that is really worthwhile	34	39	18	3	6
71.	An education is a worthwhile thing in life, even if it doesn't help you get a job	35	39	16	4	6
72.	Practical situations teach me more about solving problems than school does.	11	29	45	9	6
73.	I like school because I am improving my ability to think and solve problems.	33	43	16	2	6
74.	I am in school in order to get a job; I don't need the education and training.	6	12	31	44	6
75.	I believe an education will help me to be a mature adult.	43	37	11	2	7
76.	I can satisfy my curiosity better by the things I learn outside of school than by the things I learn here at school.	10	23	40	20	6
77.	I like school because I am learning the things I will need to know to be a good citizen.	30	41	19	4	6
78.	I feel I can learn more from a very good job than I can here at school.	7	13	34	40	7
79.	School is satisfying to me because it gives me a sense of accomplishment.	30	42	21	3	7
80.	I feel the things I do at school waste my time more than the things I do outside of school	5	12	33	45	6

We are interested in reasons people have for dropping out of school. In the list below, we've written some of the reasons people drop out. Please read each reason in the list, then put a check in the box that tells what you would do if this happened to you.
(CHECK ONE BOX ON EACH LINE)

		If this happened:			
		I would probably quit (1)	I might quit (2)	I am sure I would stay (3)	*MISSING DATA*
81.	If I had a lot of trouble learning what they were trying to teach me.	*6*	*38*	*50*	*6*
82.	If the classes were really dull and boring	*4*	*38*	*52*	*7*
83.	If they tried to boss me around too much and tell me what to do.	*10*	*35*	*48*	*7*
84.	If I weren't learning anything (new)	*9*	*35*	*49*	*7*
85.	If I could get a good job.	*6*	*26*	*62*	*7*
86.	If I couldn't manage on the money I got each week. If I couldn't make ends meet.	*9*	*33*	*51*	*7*
87.	If I never got a chance to do things I like.	*6*	*34*	*53*	*7*
88.	If I had no close friends in this school	*8*	*29*	*57*	*7*
89.	If all my friends quit school.	*6*	*25*	*62*	*7*
90.	If my teachers thought I couldn't do the work.	*6*	*35*	*52*	*7*
91.	If I never got a chance to do what I'm good at	*6*	*34*	*53*	*7*
92.	If a teacher didn't like me or pushed me around all the time	*9*	*31*	*54*	*7*
93.	If I got into trouble with the school authorities.	*8*	*33*	*52*	*7*
94.	If I got left back because I failed too many subjects. . .	*11*	*33*	*50*	*7*

		If this happened:			
		I would probably quit (1)	I might quit (2)	I am sure I would stay (3)	*MISSING DATA*
95.	If I got blamed for things I didn't do -- because of my reputation.	9	39	45	6
96.	If I thought my parents didn't care about my education . .	8	30	55	7
97.	If school didn't help me develop the skills I want to have.	8	40	45	7
98.	If I got all low marks in school, even though I tried to do well	6	29	59	7
99.	If there were a lot of reading to do and I couldn't understand it.	4	25	65	6
100.	If school didn't help me learn things I want to know. . . .	7	38	49	7
101.	If I felt there was a lot of prejudice in this school . . .	7	34	51	7
102.	If my parents wanted me to leave school and get a job . . .	14	42	38	7
103.	If the school had very tough rules and things were very strict.	5	25	64	7
104.	If people avoided me and I felt out of it	6	31	56	7
105.	If staying in school would *not* help me get a better job . .	19	38	37	6

Here are some questions dealing with things schools often make rules about. We're interested in those things you might do that could get you into trouble at school. The only way we can learn about how young men your age act is by each person giving honest answers to each question. Remember, no one at home or school will see your answers. This is completely confidential.

For each of the following questions, check the box next to the answer that tells how often you do this.
(CHECK ONE BOX ON EACH LINE)

		Almost always (1)	Often (2)	Sometimes (3)	Seldom (4)	Never (5)	*MISSING DATA*
106.	How often do you fight or argue with other students. . . .	*1*	*3*	*21*	*52*	*18*	*6*
107.	How often do you argue with your teachers.	*1*	*5*	*21*	*45*	*24*	*6*
108.	How often do you do your best work in school	*7*	*32*	*38*	*14*	*3*	*6*
109.	How often do you goof-off in class so others can't work. .	*1*	*8*	*31*	*39*	*15*	*6*
110.	How often do you come late to school	*1*	*6*	*15*	*39*	*34*	*6*
111.	How often are you late to class.	*1*	*5*	*16*	*45*	*26*	*6*
112.	How often do you skip classes (when against the school rules)	*1*	*5*	*15*	*27*	*46*	*6*
113.	How often do you come to class unprepared.	*2*	*10*	*35*	*38*	*9*	*6*
114.	How often do you do things that you know will make the teacher angry.	*1*	*4*	*24*	*45*	*20*	*6*
115.	How often do you cheat on tests.	*1*	*4*	*15*	*39*	*34*	*6*
116.	How often do you turn in sloppy or incomplete assignments.	*1*	*6*	*26*	*45*	*16*	*6*
117.	How often do you copy someone else's assignments	*1*	*7*	*24*	*44*	*19*	*6*
118.	How often are you kept after school.	*1*	*2*	*6*	*24*	*62*	*6*

The next questions ask you some more things about the kind of person you are. Please read each sentence, then mark the box to show whether it is true or false for you:

(CHECK ONE BOX ON EACH LINE)

	True (1)	False (2)	MISSING DATA
119. While taking an important examination, I perspire a great deal.	34	60	6
120. I get to feel very panicky when I have to take a surprise exam.	41	53	6
121. During tests, I find myself thinking about what it would mean to fail.	50	44	6
122. After important tests, I am frequently so tense that my stomach gets upset.	18	76	6
123. While taking an important exam, I find myself thinking about how much smarter the other students are than I am	37	57	6
124. I freeze up on things like intelligence tests and final exams	28	66	6
125. During final exams, I find myself thinking of things that have nothing to do with actual course material	53	41	6
126. During a final exam, I often get so nervous that I forget facts that I really know	44	50	6
127. I usually get depressed after taking a test	29	65	6
128. I have an uneasy, upset feeling before taking a final exam.	44	50	6
129. When taking a test, my emotional feelings do not interfere with my performance	48	46	6
130. Getting a good grade on one test doesn't seem to increase my confidence on the second.	38	56	6
131. After taking a test, I always feel that I could have done better than I actually did.	76	18	6
132. I sometimes feel my heart beating very fast during important tests	37	57	6

BOYS' QUESTIONNAIRE TIME 3

PART 1

Your code number: ________

SURVEY RESEARCH CENTER
UNIVERSITY OF MICHIGAN

YOUTH IN TRANSITION

A Nationwide Survey of Young Men

As you know, this questionnaire is part of a nationwide study of young men throughout the United States. The project is being carried out by The University of Michigan.

Many of the questions in this booklet are very similar to the questions we asked you earlier. But some of the answers may be different now, because of the changes that have taken place in your life.

As you may remember, this is not a test -- no one will be scoring you or giving you any sort of "grade." We only want to know how you feel and your ideas on things, so we can learn more about people your age.

All your answers in this questionnaire will be kept strictly confidential. No one will ever see them except the research staff at The University of Michigan.

It is very important that you answer the questions as accurately as you can. The success of the Youth in Transition Study depends on this.

PART H

These next questions are about the high school you are now attending.

1. What if any extracurricular activities have you participated in during the past year? (CHECK ALL THAT APPLY.)

PERCENT YES

18	a.	Varsity football
10	b.	Varsity basketball
9	c.	Varsity baseball
19	d.	Other varsity sports
17	e.	Intramural sports
16	f.	Other school athletic activities (cheerleading; student manager of athletic team; etc.)
10	g.	Band
3	h.	Orchestra
9	i.	Choir; Chorus; Glee Club
6	j.	Other school music group
9	k.	School newspaper
10	l.	School yearbook; School literary magazine; etc.
9	m.	School dramatics or Drama Club
5	n.	Other school speech activities or speech clubs
14	o.	Student government
6	p.	Language clubs
27	q.	Other school club or organization (PLEASE WRITE IN) ________________
8	r.	Other school club or organization (PLEASE WRITE IN) ________________
11		*MISSING DATA*

2. About how many hours do you spend in an average week on all your homework including both in school and out of school? (CHECK ONE BOX.)

5	(1)	0 hours
33	(2)	1 - 4 hours
25	(3)	5 - 9 hours
14	(4)	10 - 14 hours
6	(5)	15 - 19 hours
3	(6)	20 - 24 hours
2	(7)	25 or more hours
12		*MISSING DATA*

6. How important do you think the things you are learning in school are going to be for your later life? (CHECK ONE BOX.)

27	(1)	Very important
31	(2)	Quite important
22	(3)	Fairly important
7	(4)	Slightly important
1	(5)	Not at all important
12		*MISSING DATA*

7. What is the average grade you have been getting in your classes this year? Putting them all together, how do your grades average out? (CHECK ONE BOX.)

1	(01)	A+	(97 to 100)	17	(07)	C+	(77 to 79)
3	(02)	A	(93 to 96)	15	(08)	C	(73 to 76)
5	(03)	A-	(90 to 92)	7	(09)	C-	(70 to 72)
9	(04)	B+	(87 to 89)	2	(10)	D+	(67 to 69)
14	(05)	B	(83 to 86)	2	(11)	D	(63 to 66)
13	(06)	B-	(80 to 82)	0	(12)	D-	(60 to 62)
				0	(13)	E (F)	Failing
				12		*MISSING DATA*	

How true is each of these statements about you and your school?	Very true (1)	Somewhat True (2)	Not at all true (3)	*MISSING DATA*
8. My school work gives me a good chance to use my skills and abilities . . .	18	59	11	12
9. My school work gives me a good chance to learn new things and improve myself .	34	48	6	12
10. Planning to go to college is important for being looked up to by other students in my school	21	42	25	12

The following questions are about you and the counselors in your school.

38. How many times this school year have you seen a counselor? (CHECK ONE BOX.)

12	(1)	No times
7	(2)	1 time
14	(3)	2 times
28	(4)	3 or 4 times
14	(5)	5 - 7 times
7	(6)	8 - 10 times
2	(7)	11 - 15 times
4	(8)	More than 15 times
12		*MISSING DATA*

39. Would you have preferred to see a counselor more or less often than you have during the past year? (CHECK ONE BOX.)

8	(1)	Much more often
23	(2)	A little more often
48	(3)	About as often
4	(4)	A little less often
5	(5)	Much less often
13		*MISSING DATA*

IF YOU HAVE NOT SEEN A COUNSELOR IN THE PAST YEAR, SKIP NOW TO PAGE 49
IF YOU HAVE SEEN A COUNSELOR AT LEAST ONCE, CONTINUE ON WITH QUESTION 40.

40. How helpful have your sessions with a counselor been to you? (CHECK ONE BOX.)

10	(1)	Extremely helpful
27	(2)	Quite helpful
20	(3)	Somewhat helpful
13	(4)	A little helpful
5	(5)	Not at all helpful
25		*MISSING DATA*

Consider now the total amount of time you have spent talking to a counselor (or counselors) in the past year. How much of this total time have you spent talking about each of the following topics?

41. How much time was spent choosing what courses to take or what program to be in? (CHECK ONE BOX.)

9	(1)	No time
22	(2)	Less than 1/2 hour
14	(3)	About 1/2 hour
14	(4)	About 1 hour
5	(5)	About 1 1/2 hours
5	(6)	About 2 hours
3	(7)	About 3 hours
4	(8)	4 or more hours
25		*MISSING DATA*

41a. Would you have preferred more or less of this type of counseling? (CHECK ONE.)

7	(1)	Much more
20	(2)	A little more
42	(3)	About right
3	(4)	A little less
3	(5)	Much less
25		*MISSING DATA*

42. How much time was spent discussing problems you have or have had with course work? (CHECK ONE BOX.)

26	(1)	No time
20	(2)	Less than 1/2 hour
12	(3)	About 1/2 hour
9	(4)	About 1 hour
2	(5)	About 1 1/2 hours
3	(6)	About 2 hours
1	(7)	About 3 hours
1	(8)	4 or more hours
25		*MISSING DATA*

42a. Would you have preferred more or less of this type of counseling? (CHECK ONE.)

6	(1)	Much more
18	(2)	A little more
43	(3)	About right
3	(4)	A little less
5	(5)	Much less
25		*MISSING DATA*

43. How much time was spent discussing any trouble you may have gotten into in school? (CHECK ONE BOX.)

51	(1)	No time
11	(2)	Less than 1/2 hour
5	(3)	About 1/2 hour
4	(4)	About 1 hour
1	(5)	About 1 1/2 hours
1	(6)	About 2 hours
1	(7)	About 3 hours
1	(8)	4 or more hours
26		*MISSING DATA*

43a. Would you have preferred more or less of this type of counseling? (CHECK ONE.)

3	(1)	Much more
6	(2)	A little more
48	(3)	About right
4	(4)	A little less
13	(5)	Much less
28		*MISSING DATA*

44. How much time was spent discussing military plans or obligations? (CHECK ONE BOX.)

44	(1)	No time
15	(2)	Less than 1/2 hour
5	(3)	About 1/2 hour
5	(4)	About 1 hour
2	(5)	About 1 1/2 hours
1	(6)	About 2 hours
1	(7)	About 3 hours
1	(8)	4 or more hours
26		*MISSING DATA*

44a. Would you have preferred more or less of this type of counseling? (CHECK ONE.)

7	(1)	Much more
16	(2)	A little more
41	(3)	About right
2	(4)	A little less
7	(5)	Much less
27		*MISSING DATA*

45. How much time was spent discussing plans for your education or training after high school? (CHECK ONE BOX.)

7	(1)	No time
14	(2)	Less than 1/2 hour
13	(3)	About 1/2 hour
15	(4)	About 1 hour
6	(5)	About 1 1/2 hours
8	(6)	About 2 hours
5	(7)	About 3 hours
7	(8)	4 or more hours
26		*MISSING DATA*

45a. Would you have preferred more or less of this type of counseling? (CHECK ONE.)

12	1)	Much more
26	(2)	A little more
34	(3)	About right
1	(4)	A little less
1	(5)	Much less
26		*MISSING DATA*

46. How much time was spent discussing your career or job choice? (CHECK ONE BOX.)

19	(1)	No time
20	(2)	Less than 1/2 hour
13	(3)	About 1/2 hour
12	(4)	About 1 hour
3	(5)	About 1 1/2 hours
4	(6)	About 2 hours
1	(7)	About 3 hours
3	(8)	4 or more hours
26		*MISSING DATA*

46a. Would you have preferred more or less of this type of counseling? (CHECK ONE.)

13	(1)	Much more
23	(2)	A little more
35	(3)	About right
1	(4)	A little less
2	(5)	Much less
26		*MISSING DATA*

47. How much time was spent discussing personal problems? (CHECK ONE BOX.)

50	(1)	No time
13	(2)	Less than 1/2 hour
5	(3)	About 1/2 hour
4	(4)	About 1 hour
1	(5)	About 1 1/2 hours
1	(6)	About 2 hours
1	(7)	About 3 hours
1	(8)	4 or more hours
25		*MISSING DATA*

47a. Would you have preferred more or less of this type of counseling?(CHECK ONE.)

5	(1)	Much more
11	(2)	A little more
49	(3)	About right
2	(4)	A little less
7	(5)	Much less
26		*MISSING DATA*

48. How much time was spent on procedures and applications for your getting a permanent job after you graduate from high school? (CHECK ONE.)

54	(1)	No time
9	(2)	Less than 1/2 hour
5	(3)	About 1/2 hour
4	(4)	About 1 hour
1	(5)	About 1 1/2 hours
1	(6)	About 2 hours
1	(7)	About 3 hours
1	(8)	4 or more hours
25		*MISSING DATA*

48a. Would you have preferred more or less of this type of counseling?(CHECK ONE.)

9	(1)	Much more
14	(2)	A little more
45	(3)	About right
1	(4)	A little less
5	(5)	Much less
27		*MISSING DATA*

BOYS' QUESTIONNAIRE TIME 4

Your code number: __________

SURVEY RESEARCH CENTER
UNIVERSITY OF MICHIGAN

YOUTH IN TRANSITION

A Nationwide Survey of Young Men

As you know, this questionnaire is part of a nationwide study of young men throughout the United States. The project is being carried out by The University of Michigan.

This is *not a test* -- no one will be scoring you or giving you any sort of "grade." We only want to know how *you* feel and *your* ideas on things, so we can learn more about people your age.

All your answers in this questionnaire will be kept *strictly confidential*. No one will ever see them except the research staff at The University of Michigan.

It is very important that you answer the questions as accurately as you can. The success of the Youth in Transition Study depends on this.

TIME 4

PART F.

This section presents a number of important issues. Some of the issues are controversial, so if you find particular questions which you would rather not answer, just leave them blank and go on with the rest.

We would like you to indicate whether you agree or disagree with each statement.

(CHECK ONE BOX ON EACH LINE)

	Agree (1)	Mostly agree (2)	Mostly disagree (3)	Disagree (4)	*MISSING DATA*
1. High schools should offer courses in sex education . . .	*63*	*30*	*5*	*2*	*1*
2. High schools should offer instruction in birth control methods.	*44*	*35*	*15*	*5*	*2*

14. Did you have a unit on sex education when you were in high school?

36	(1) Yes	
58	(2) No, and I wish I had	→ GO TO QUESTION 15
6	(3) No, and I'm glad I didn't	
2	MISSING DATA	

14a. (IF YES) How worthwhile was it?

35	(1) Very worthwhile
50	(2) Somewhat worthwhile
14	(3) Not worthwhile at all
1	MISSING DATA

15. Did you ever study about birth control methods in high school?

15	(1) Yes	
76	(2) No, and I wish I had	→ GO TO QUESTION 16
9	(3) No, and I'm glad I didn't	
2	MISSING DATA	

15a. (IF YES) How worthwhile was it?

46	(1) Very worthwhile
47	(2) Somewhat worthwhile
7	(3) Not worthwhile at all
1	MISSING DATA

16. During your teenage years, did you get sex information from your parents?

38	(1) Yes	
42	(2) No, and I wish I had	→ GO TO QUESTION 17
20	(3) No, and I'm glad I didn't	
2	MISSING DATA	

16a. (IF YES) How worthwhile was it?

41	(1) Very worthwhile
50	(2) Somewhat worthwhile
8	(3) Not worthwhile at all
0	MISSING DATA

PART G.

The following questions ask about your high school experience.

1. Looking back, how do you feel about the high school program of studies you took (that is, vocational, college prep, general, etc.)? Do you feel that you chose the best program available to you?

34	(1) I definitely made the best choice for me
53	(2) I probably made the best choice for me
12	(3) I should have been in another program
1	*MISSING DATA*

(PLEASE SPECIFY WHICH PROGRAM YOU WISH YOU HAD TAKEN:

____

2. How satisfied are you with the amount of effort you put into your studies in high school?

7	(1) Very satisfied
22	(2) Quite satisfied
37	(3) Somewhat satisfied
29	(4) Not very satisfied
5	(5) Not at all satisfied
1	*MISSING DATA*

3. How helpful were your high school counselors in getting you into the high school, college, or job you were seeking after high school?

25	(1) Not at all helpful
31	(2) Slightly helpful
26	(3) Moderately helpful
13	(4) Quite helpful
5	(5) Very helpful
1	*MISSING DATA*

Below are listed several possible long-term objectives that might be held by a high school. We would like you to make two ratings of each objective:

(A) How much importance do you think the administrators and teachers in your high school gave to each of the following objectives for your school? Make your judgment based on what you think they were actually trying to do; and

(B) How much importance do you think should have been given to each objective in your high school?

	(A) APPARENT IMPORTANCE TO YOUR HIGH SCHOOL ADMINISTRATORS AND TEACHERS						(B) IMPORTANCE YOU THINK SHOULD HAVE BEEN GIVEN					
	Low (1)	Moderate (2)	High (3)	Very high (4)	Extremely high (5)	*MISSING DATA*	Low (1)	Moderate (2)	High (3)	Very high (4)	Extremely high (5)	*MISSING DATA*
4. Transmitting a thorough knowledge of subject matter	3	31	36	17	7	6	1	13	34	27	16	9
5. Preparing students to assume the family roles of spouse and parent .	35	35	14	6	3	7	6	24	32	19	9	11
6. Preventing drop-outs.	15	27	24	15	12	8	3	10	26	26	24	11
7. Developing students' interests in political processes and social issues.	12	37	28	14	4	6	3	14	35	26	14	9
8. Maintaining order and quiet in the school.	4	21	30	24	15	7	4	23	36	19	9	9
9. Increasing students' motivation and desire to learn	10	30	30	16	7	7	2	9	27	30	23	9
10. Improving students' social and psychological adjustment.	16	36	28	11	4	6	2	14	35	27	14	9
11. Developing students' concern for others.	18	34	28	10	4	6	3	13	37	25	15	8

	(A) APPARENT IMPORTANCE TO YOUR HIGH SCHOOL ADMINISTRATORS AND TEACHERS						(B) IMPORTANCE YOU THINK SHOULD HAVE BEEN GIVEN					
	Low (1)	Moderate (2)	High (3)	Very high (4)	Extremely high (5)	*MISSING DATA*	Low (1)	Moderate (2)	High (3)	Very high (4)	Extremely high (5)	*MISSING DATA*
12. Developing outstanding athletes and athletic teams	4	21	35	24	10	6	5	27	33	17	10	9
13. Increasing student understanding of occupational opportunities and of the necessary skills, training, and interests.	9	31	37	13	5	6	1	10	39	29	12	9
14. Responding to the individual academic needs of students	13	37	28	12	5	7	2	11	31	30	16	10
15. Getting a high proportion of students into college.	6	26	33	20	9	7	2	16	35	24	13	10
16. Achieving outstanding academic performance.	4	24	37	19	9	7	2	15	38	23	12	10
17. Giving non-college-bound students vocational skills.	14	29	29	14	7	6	2	9	32	29	20	9

APPENDIX B

EXPLORING ALTERNATIVE ANALYTIC APPROACHES

The major conclusion of this volume is that no differential school effects of any importance can be meaningfully attributed to any of a host of attributes of the school. One potential criticism of the procedure used in arriving at this conclusion is that in our effort to avoid false-positive findings -- an effort which led us to look at each school characteristic in relation to the whole set of student outcomes at once -- we may have arrived at a number of false-negative findings. In other words, if a particular school characteristic had an important and valid relationship with only one or two of the student outcomes, that fact may have been lost in the procedure used, since the predictive power of each school characteristic was assessed against some fifty student outcomes taken as a set.

TWO ALTERNATE APPROACHES

In order to test the seriousness of the false-negative conclusions which may have been reached in this manner, two alternative analytic approaches will be explored in this appendix. The first, and by far the most widely used approach in the social sciences, is to test hypotheses which are specified a priori between specific pairs of variables. This method was not used routinely in this study. Instead, the hypotheses which led to the inclusion of most of our instrumentation were of a general form: namely, that each characteristic chosen for measurement would have either beneficial or detrimental effects on students, as measured by any of our 53 student outcomes, and that those effects would tend to be monotonic for the most part. Since the direction of the effects could be prespecified, we could say in advance that we thought a higher value on any given school characteristic would correspond with either a higher or lower value on any given student outcome, assuming that there was any relationship to be found. (See page 81 for a set of such hypotheses.)

The second alternative approach to be explored here does not involve prior hypotheses but does involve looking at pairwise relationships of school characteristics with specific outcome variables, rather than with sets of outcome variables. This is the post hoc method which errs in the direction of reaching false-positive conclusions in an attempt to avoid false-negative ones. For example, if under this method we were using standard significance tests to identify relationships which were significant at the .05 level, we would expect to find about five percent of those relationships to be significant simply due to chance. If in one percent of the cases "real" relationships existed with sufficient strength to show up as statistically significant, then we would observe that about 6% of the relationships were significant, even though only 1% were valid relationships and the rest due to sampling and measurement error. At that point we would not have lost the kernels of wheat, as we might have done using the method described in this volume, but they unfortunately still would be indistinguishable from a quantity of chaff five times as great. In such a case most of our positive findings would be false, which was not a very attractive prospect.

The purpose of this appendix is not to do a full set of reanalyses of the entire data structure using these alternative techniques, which were rejected as the central approaches earlier, but rather to try to establish the potential of those other methods for coming to conclusions which would be seriously at odds with the main conclusions reached in this volume. It should be remembered that the main conclusion was not that there were not any statistically signficiant relationships between any of the school characteristics and any of the outcome variables, but rather that none of the school characteristics showed relationships to student outcomes which were of any moment. Therefore, the emphasis was not on significance testing but on variance explained, and that will continue to be the emphasis in what follows.

THE HYPOTHESIS TESTING APPROACH

For obvious pragmatic reasons, only a few hypotheses could be selected for testing here. Several from the literature on formal organizations -- hypotheses which had motivated us to include the related variables in our instrumentation -- were the ones selected.

The Hypotheses. The first two hypotheses selected,which are discussed in the instrument development section of this volume on page 79, derive from the work of Tannenbaum (1962) and relate to the amount and distribution of control in an organization. Tannenbaum argues that satisfaction and productivity are enhanced to the extent that there is more total control across all levels of the organization. He assumes that the amount of "say" which people have in the running of an organization is not a fixed quantity. He operationalizes the total amount of control by the sum of the control across all levels, as reported by the respondents. In the analyses reported here two different indices of total control were used -- one derived from student data and one derived from teacher data.

Tannenbaum also argues that the less steep the control curve -- that is, the less discrepancy in influence between the top echelon and lower echelons in the organization -- the greater will be the satisfaction of those in the lower echelons, and perhaps productivity will also be higher. A single discrepancy score was used for the analyses here based on two ingredient scores derived from teacher data. The average teacher rating of the amount of influence students have in the running of the school was subtracted from the average teacher rating of the amount of influence the principal has. The difference is assumed to reflect the influence discrepancy between the two levels or, put another way, the slope of the influence curve.

The second set of hypotheses were derived from the work of French and Raven (1960) and have also been discussed earlier. (See page 79 of this volume.) Research using the instruments they developed to assess the strength of five different types of social power showed that satisfaction and productivity tended to be higher when supervisors exercised expert and referent power, and tended to be lower when they exercised legitimate and coercive power. The replicability of these findings in schools can be tested in the present data set -- in which the basis of teacher power over the students was rated by the students -- presuming that satisfactory measures of productivity and satisfaction can be established.

Procedure. Having specified the hypotheses to be tested and the independent variables to be used (total control, slope of control, and bases of power), our next steps were to select appropriate dependent variables to reflect organizational productivity and student satisfaction, and then to conduct the appropriate analyses.

Satisfaction Measures. Three Time 3 measures of student satisfaction with school, which is presumably analagous to job satisfaction for workers, were chosen. Two are indices which we have titled Positive School Attitudes and Negative School Attitudes. The first is comprised of fifteen items in which the student is rating the intrinsic values of education and schooling. A typical item is "I feel satisfied with school because I learn more about things I want to know." Negative School Attitudes is an index of eight negatively stated items, most of which compare non-school activities favorably to school activities, such as "Instead of being in this school, I wish I were out working." The two scales correlate -.55 in the aggregate level data discussed here (N=79). The third satisfaction measure is based on a single Time 3 item in which the student rated how interesting he found his courses. At the aggregate level, this item correlates .47 with Positive School Attitudes and -.21 with Negative School Attitudes.

Other Measures of Productivity. Although we consider all of our student outcome measures to be potential indicators of school productivity -- including the satisfaction measures just discussed -- four of those which came closest to traditional definitions of school purposes were selected for consideration here. The first, College Plans, is simply the percent of each school's sample of boys who planned to attend college by the end of senior year.* The second, Status of Aspired

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* Only students who remained in the same school throughout the first three data collections are included in the data base described here.

Occupation, is the school average of the Duncan socioeconomic status score assigned to the occupation to which each boy aspired at Time 3. The third "productivity" variable, SAT Score, is an average of the math and verbal scores achieved in senior year by all of our participants in each school who took the Scholastic Aptitude Test. (The verbal score is double weighted in the average.) Since there is variability from school to school in the proportion and type of youngster taking these tests, this must be viewed as a crude measure of the academic achievement of the student body, at best. It correlates only .15 with College Plans and .15 with Status of Aspired Occupation. It does, however, correlate .32 with the fourth measure selected to reflect productivity, Self Concept of School Ability.

Self Concept of School Ability is based on three items in which a student rates himself on scales going from "far above average" to "far below average." They ask about his "school ability" compared with those in his grade in school, his intelligence compared with other boys his age, and his reading ability compared with other boys his age. This variable has given evidence of reflecting fairly accurate self-perceptions. It has shown strong positive relationships with scores on the various tests used in the study (at the individual level of analysis at Time 1): $r = .43$ with the Quick Test of Intelligence, $r = .50$ with the GATB-J Vocabulary Test, and $r = .38$ with the Gates Reading Test. In addition to correlating .32 with SAT Scores at the aggregate level of analysis, it correlates .42 with College Plans and .46 with Status of Aspired Occupation.

Analyses. Since the hypotheses discussed above all involved ordinal relationships, the use of correlations to test for the existence of such relationships seemed a reasonable strategy. Therefore, a correlation table was generated which contained all of the independent and dependent variables discussed above. In addition, change scores for six of the seven student outcomes were also calculated, based on school average scores, and included in the table. (The exception was the SAT Score, on which no repeat measurement was available.) All of the change scores reflect changes between Time 1 and Time 3, i.e. beginning of tenth grade to the end of twelfth, except for Self Concept of School Ability, which is a Time 1 to Time 2 change score.

Results. Since a number of measures of some of the independent variables had been used, it will simplify the discussion to eliminate those which are redundant or less desirable. For example, total influence in the school was represented in the analyses by one index derived from boys data and two indexes derived from teacher data. The two teacher indexes differed in the number of hierarchical levels upon which the index was based. One, which we view as closest to Tannenbaum's set, included only principal, teachers, and students. The other, which also included the board and superintendant (rated jointly) and the parents, was run because it was a better match of the levels included in the index derived from boys.

As it turned out, the two teacher indexes correlated with each other .73, and behaved quite similarly in terms of the way they correlated with the 13 selected student outcomes. Therefore, only one will be reported on here; that based on the principal, teachers, and students. It correlated .40 with the boys index of total control.

Also, three of the five bases of power behaved very similarly in relation to the student outcomes and, as we already knew, had high intercorrelations among themselves. Therefore, only the results of an index based on a combination of the three -- referent power, expert power, and legitimate power -- will be reported here. This index had been constructed during the data reduction process for exactly the reasons cited here, and any statements made about it would be about equally applicable to any of the three ingredient variables.*

We will consider now the results relevant to each of the hypobheses set forth earlier.

Hypothesis 1: Higher Total Control Yields Greater Satisfaction

Using the measure of control which we would expect to be the least affected by shared measurement error problems in predicting to the three static satisfaction measures (i.e. the teachers' ratings of total control), we find almost no relationship between the variables.** Of the two slight relationships which do exist, .07 and .13, one is in the opposite direction to that hypothesized.

The strongest observed correlations between the control ratings derived from students and the satisfaction measures are of moderate strength (.29 and .23) and in this case are in the hypothesized direction; but these correlations are, of course, suspect. When background and demographic variables are held constant, these two relationships are severely diminished, dropping the partial correlations to .15 and .10 respectively, suggesting that biases in reporting -- which probably

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[*] It is worth noting that legitimate power did not behave in a manner opposite to referent and expert power, as previous studies had suggested.

[**] See page A76 of Appendix A for the influence questions asked of teachers and page A113 for the influence questions asked of boys.

would be related to the types of students reporting -- may be artifactually heightening the relationship.** Further evidence of this is found in the fact that the student ratings of total influence show no correlations with changes in satisfaction during high school. Since the teacher data seem to be the most reliable source of information on the independent variables, the most reasonable conclusion seems to be that the hypothesis is not confirmed.

Hypothesis 2: Higher Total Control Yields Higher Productivity

Insofar as student motivation is a component of productivity, we already know that the hypothesis is not confirmed in that realm. Correlations between either of our measures of total control and the four other static outcome measures are also very low, the highest correlation being .16, and only five of the eight relationships come out in the hypothesized direction. Therefore, the hypothesis is not confirmed.

Hypothesis 3: Greater Equality of Influence Yields Higher Satisfaction

The independent variable is a measure of the discrepancy in influence between the upper and lower levels of the organization -- in this case the principal and the students. The influence ratings used as ingredients to derive the discrepancy scores came from teachers. (See page A76, question 1, in Appendix A for the original questions.)

We find some support for the hypothesis in the data. The greater the equality of influence between the two levels, the greater the Positive School Attitudes of the students (r= .26). The other two satisfaction measures correlate less than .06 with the variable.

The change score data also come out as predicted, with influence equality correlating .23 with change in Positive School Attitudes, -.20 with change in Negative School Attitudes, and .17 with change in interest in coursework. Thus there does seem to be some hypothesis confirmation here.

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[*] The sets of demographic and background variables referred to as control variables in this appendix are listed in Table B-1.

In terms of explanatory power, this influence-discrepancy variable can explain 6.8% of the between-school variance but less than 1% of the individual level variance in Positive School Attitudes (i.e. .07%), and that is before any controls are introduced. Thus, while the effects seem to be in the right direction, they are hardly of much practical importance and, therefore, not inconsistent with the major conclusions of this volume.

Hypothesis 4: Greater Equality of Influence Yields Greater Productivity

Insofar as the satisfaction outcomes are a part of productivity, the results in that domain tend to be confirming, as is illustrated above. Using the other four static outcome measures, however, we tend to get disconfirming results -- in particular for occupational plans (r= -.42) and college plans (r= -.20), where the relationships are in the opposite direction to those predicted. Relationships with the Time 1 to Time 3 change scores on these variables are also in the opposite direction. Therefore, the hypothesis does not receive confirmation in the area of non-satisfaction types of productivity, i.e. the traditionally defined areas of productivity.

Hypothesis 5: Greater Referent and Expert Power at Supervisory Levels Leads to Greater Satisfaction Among Subordinates

A single index of the bases of teacher power over students was used. It combined the referent, expert, and legitimate power of the teachers, for reasons described earlier. (See page A115 in Appendix A for the ingredient variables.)

Correlations with the three satisfaction measures all emerged in the predicted direction, and two of them were quite strong: r=.48 with Positive School Attitudes, r= -.40 with Negative School Attitudes, and r= .14 with Interest in Courses. Unfortunately, however, correlated measurement error could account for much or all of the observed relationships, given that the independent and dependent variables are so similar conceptually, and that both are reported by the same respondents. A student who says he does not like school seems more likely to say that he does not respect his teachers or that he does not think they know more than he does, whether or not that is actually how he feels. So, although there is some confirming evidence for the hypothesis, it must be viewed with considerable skepticism given the nature of the measurement problems.

If the index reflecting these bases of teacher power in the school *were* accorded all of the explanatory power inherent in its zero-order correlation, then it would account for nearly 25% of the between-school variance and 2.8% of the individual level variance in Positive School Attitudes. If it were accorded only that variance it could explain beyond what our standard set of demographic and background variables can explain, then it would account for 9% of the between-school variance and only 1% of the individual level variance.

Hypothesis 6: Greater Referent and Expert Power Yield Greater Productivity Among Subordinates

Using the same index of referent-expert-legitimate power, we find that it does not show consistent positive relationships with the four non-satisfaction measures of productivity. Its strongest relationships (r= -.27 with the SAT Scores) is in the wrong direction. It correlates .16 with Self Concept of School Ability, and .07 with Status of Aspired Occupation, but shows another negative relationship (-.07) with College Plans. Further, its correlations with the average change scores on the last three variables are small and two are in the negative direction. Therefore, the hypothesis is not confirmed in the domains represented by these traditional measures of productivity.

Hypothesis 7: Greater Use of Coercive Power Yields Lower Satisfaction

The variable relates in the expected direction with the three satisfaction measures, though the relationships are not strong (r= -.08 with Positive School Attitudes, r= .23 with Negative School Attitudes, and r= -.01 with Interest in Courses). Thus this school characteristic could explain very little of the individual level variance in the satisfaction outcomes, particularly after controls were introduced, although it is not disconfirmed in these data.

Hypothesis 8: Greater Use of Coercive Power Yields Lower Productivity

Paradoxically, the coercive power of the teachers turns out to be most strongly related to non-satisfaction outcomes. It correlates -.19 with SAT Scores, -.31 with Status of Aspired Occupation, -.35 with College Plans, and -.18 with Self Concept of School Ability. The paradox is resolved, however, if we recall that the explanatory power of this variable in the main study was greatly diminished when controls for SEL were introduced. (See Table 7, page 114.) The same thing happens here when the standard sets of background and demographic variables are controlled. For example, although the variable explains 12% of the between-school variance in College Plans, zero-order, it explains only 3.3% of that between-school variance uniquely. Probably the most plausible explanation is that youngsters of lower socioeconomic level, having lower academic performance, and not college-bound, tend to elicit a greater use of coercive power from the teachers. (The correlation between SEL and Coercive Power is -.40.)

Regardless of whether that is a reasonable action on the part of the teachers, the point is that such a differential response to different types of students would create correlations between Coercive Power and the various performance variables which, if they reflect any causal connections, reflect ones that run in the opposite direction than stated in the hypothesis. That is, highly productive students tend to elicit less use of coercive power by teachers, not vice versa.

Analyses of the change data tend to support this conclusion, since there is little evidence that there is a decrement during high school in College Plans, Occupational Aspirations, or Self Concept of School Ability as a result of having teachers with greater coercive power. Therefore, if the coercive power of the teachers was a causal factor, it must have had its effects before high school.

Conclusions Regarding the Hypothesis-Testing Approach

Eight hypotheses derived from organizational theory have been tested here, an admittedly small sampling of all those extant. Only three received a reasonable degree of substantiation in the data, and serious methodological issues cloud even those findings. However, probably the most important point to be gleaned from these results is that, even if the strongest relationships are taken as valid, none of the organizational characteristics examined were able to explain much of the individual level variability in the relevant student outcomes, even before controls were introduced. Therefore, this particular sampling of hypothesis tests did not yield any results which were basically inconsistent with the conclusions based on the original method of analysis.

SELECTING THE BEST PREDICTORS AFTER THE FACT

The second analysis alternative to be explored here is the one in which the analyst picks school characteristics to be used as predictors after the data are in, in other words after he knows which will be the most successful. In a sense, this method constitutes a means of setting outer limits on the potential success of any hypothesis in a given class; the class being delimited by the set of relationships available for examination and by the nature of the statistics being used for post hoc procedure. For instance, since only product-moment correlations were examined in the analyses done for this Appendix, the classes of hypotheses being examined are only those relating to ordinal or interval relationships between the dependent and independent veriables in question. Hypotheses positing relationships which are curvilinear, interactive, or masked would not be encompassed here.

In a sense, what we hope to find in this examination is the greatest amount of explanatory power any school characteristic might have with each selected student outcome, regardless of whether the relationship is valid or not and regardless of whether it was hypothesized or not. We are looking for the outer limits of possible school effects, at least ordinal main effects.

The Procedure. To simplify the task somewhat, we decided to use only those thirteen student outcomes which were discussed in the last section (i.e. seven static scores plus six change scores). While they are only a sampling of the 53 used in the main study, they certainly are a diverse set of some of the more important ones.

For each of the seven static measures, we scanned its correlations with all 284 school characteristics emerging from Phase I of the data reduction, and selected several of those having the highest zero-order correlations with each. Then, in order to select the single predictor from each set that would contribute the most unique explanatory power vis a vis the outcome in question, we calculated partial correlations in which the standard set of background and demographic variables listed in Table B-1 were held constant. (The same set of selected school characteristics was also regressed on the change score for each variable.) For each student outcome, the school characteristics having the highest partial correlation was then identified as "the best school predictor" and carried into further analyses. The best predictors to each of the thirteen outcomes are listed in Table B-1.

Next a series of multiple regressions was run in which each student outcome was regressed on (a) the set of background variables, (b) the set of demographic variables, and (c) the demographic and background

TABLE B-1

Testing the Explanatory of the Power of the Best Predictor Defined Ex Post Facto for Static and Change Scores (Aggregate Level Analyses N=79)

Dependent Variable	Best Predictor	Level of Analysis	r^2	Marginal R^2 After Demographic	Marginal R^2 After Background	Marginal R^2 After Demo & Backgd.
Positive School Attitudes T3	Admin. Objective Academic Achievement	Aggregate	.168	.137	.154	.121
"	"	Individual	*.018*	*.015*	*.017*	*.013*
Negative School Attitudes T3	Bases of Teacher Power Index Ref/Expert/Legit	Aggregate	.157	.180	.172	.187
"	"	Individual	*.012*	*.014*	*.013*	*.015*
Interest in Courses T3	No. of Agricultural H.S.'s in System	Aggregate	.107	.060	.069	.036
SAT Scores T3 (2x Verbal + Math)	% 10-12 Boys in College Prep	Aggregate	.005	.001	.107	.068
Status of Aspired Occupation T3	Req'd Time in School for Teachers	Aggregate	.154	.026	.088	.046
"	"	Individual	*.021*	*.004*	*.012*	*.006*
College Plans T3	% 10-12 Boys in College Prep	Aggregate	.405	.343	.163	.154
"	"	Individual	*.055*	*.047*	*.022*	*.021*
Self Concept of Sch Ability T2	No. Vocational H.S.'s in System	Aggregate	.148	.102	.059	.072
"	"	Individual	*.016*	*.011*	*.006*	*.008*

TABLE B- 1 CONT'D

Dependent Variable	Best Predictor	Level of Analysis	r^2	Marginal R^2 After Demographic	Marginal R^2 After Background	Marginal R^2 After Demo & Backgd.
		CHANGE SCORE ANALYSIS				
Positive School Attitudes T1-T3 Change	Admin. Objective Academic Achievement	Aggregate	.208	.165	.190	.152
Negative School Attitudes T1-T3 Change	Bases of Teacher Power Index Ref/Expert/Legit	Aggregate	.015	.031	.012	.021
Interest in Courses T1-T3 Change	No. of Agricultural H.S.'s in System	Aggregate	.161	.112	.134	.073
Status of Aspired Occupation T1-T3 Change	Diff. in Influence Between Princ. & Studts.	Aggregate	.041	.059	.041	.047
College Plans T1 -T3 Change	% 10-12 Boys in College Prep	Aggregate	.080	.087	.048	.056
Self Concept School Ability T1-T2 Change	Adequacy Time for Plan. & Eval. (tchr. Rating)	Aggregate	.023	.032	.033	.034

r^2: square of the zero order-correlation between the best predictor and the dependent variable.

Marginal R^2 After Demographic: Difference between the R^2 from a multiple regression using only the demographic variable set and the R^2 from a multiple regression using that same set plus the best predictor. Variables included in the demographic set are: urbanicity and region (represented by three dichotomous "dummy"variables).

Marginal R^2 After Background: Difference between the R^2 from a multiple regression using only the background variable set and the R^2 from a multiple regression using that same set plus the best predictor. Variables included in the background set are: two measures of average SEL of the student body, a measure of the percent of the sample in the school which is black, and three test score averages from the sample in each school at Time 1 (QT, GATB-J, and Gates).

Marginal R^2 After Demographic and Background: An analagous to the procedure to the one described above except that the first set of variables contains all those which comprise the demographic and background sets taken together.

variables taken as a set. Having determined the amount of variance each of these three sets of variables was able to explain, we then sought to determine the marginal explanatory power gained by adding "the best school predictor" to each set for each student outcome and then re-running the regressions.

Results. Table B-1 presents the marginal or unique explanatory power of the best school predictor to each outcome at the aggregate and (in several cases) the individual levels of analysis. First, the square of the zero-order correlation between the dependent variable and its best predictor is given, so that one can assess the strength of that predictor before any controls are introduced. Then, the marginal explanatory power of the predictor, after controlling, is presented for each of three sets of control variables. From this table, then, we can define the outer limits of the linear pairwise relationships which exist between each of these student outcomes and a very large set of school characteristics. Put another way, these are the very strongest of the pairwise linear relationships which might have been missed by our original method of analysis.

At the school level some of the relationships are quite impressive, particularly the zero-order relationships. Taken alone, Percent of 10-12 Boys in College Preparatory Curriculum can explain 41% of the between-school variance in College Plans; and it can add 15% to the variance explainable by the background and demographic characteristics. It is by far the strongest variable at the aggregate level, however, since the second highest r^2 in the table is only .17, reflecting the relationships between administrative emphasis on academic achievement and Positive School Attitudes.

Of the set of "best predictors," the one able to add the most explanatory power after full controls are introduced is the Bases of Teacher Power Index, discussed previously, which can add 19% to the variance explainable by the background and demographic characteristics in predicting to the outcome variable Negative School Attitudes. Oddly enough, it explains more variance after these controls have been introduced than before, suggesting that some of its effects are masked by one or more of the background or demographic variables. Thus in relation to the static scores, the explanatory power of some of these best predictors at the aggregate level is fairly impressive.

Their power in relation to the six aggregate change scores, however, is much less impressive. They can only explain between 2% and 16% of the changes in student outcome averages during high school, suggesting that the static relationships primarily reflect either (a) effects of the school characteristic which cumulated during a prior stage of schooling or (b) the mutual effects of third variables such as background characteristics. If we consider that the changes which occurred during high school in these student outcome dimensions accounted for only a limited proportion of the total Time 3 variance (See Table B-2), then the change score results give rather little support for the idea that the way the students end up at Time 3 can be explained by the differential impacts of their high schools per se.

Having examined the results at the aggregate level for both static and change measures on the student outcomes, we turn last to a consideration of the results of the individual level analyses. It is here that the ultimate test resides, since accounting for between-school variance is only important if the between-school variance itself is a substantial part of the total variance.

As the italicized numbers in Table B-1 indicate, the explanatory powers of the best predictors are very substantially reduced at the individual level of analysis. The Percent of 10-12 Students in the College Preparatory Curriculum now explains only 5.5% of the variance zero-order, instead of the 40.5% it explained at the aggregate level. After full controls, which seem particularly needed given the nature of the variable, it explains only about 2%.* The other best predictors explain from .6% to 1.5% uniquely and no more than 2.1% without any controls. These numbers are roughly of the same magnitude as those generated by the major method of variable selection and analysis used in this volume, meaning that this alternative method of analysis did not yield results which were substantially different in their major thrust from those of the original analyses.

In sum neither of the alternative approaches explored here -- that is, neither the hypothesis testing approach nor the "best predictor" post hoc approach -- yielded results which were fundamentally at odds with our major findings. It still seems true that the most reasonable conclusion which can be drawn from this study is that no differential school effects of particular importance can be meaningfully attributed to any of the host of school attributes studied.

As the results in Table B-1 clearly illustrated, even school characteristics which had a substantial ability to explain differences between average school scores, lost their explanatory power when they were used to explain the variation among the individual students. The reason, of course, is that so little of the total variability in the student outcomes

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* Even after introducing demographic and background controls, there is a serious question of whether we have controlled all extraneous factors, since the explanatory power of this variable is undoubtedly due in large part to the self selection of students into college preparatory programs.

TABLE B-2

Proportion of Time 3 Variance In Student Outcomes Attributable to Change During High School (N=79 schools)

	Relationship Between the T3 Static Score and the T1-T3 Change Score on the Same Variable	
	r	r^2
Positive School Attitudes	.65	.42
Negative School Attitudes	.37	.14
Interest in Courses	.61	.37
Status of Aspired Occupation	.27	.07
College Plans	.53	.28
Self Concept of School Ability*	.48	.23

* For the variable Self Concept of School Ability the correlation is between the T1-T2 change score and the T2 static score since no measurement was made at T3.

TABLE B-3

Between-School Variance as a Proportion of Total Variance on Selected Student Outcomes

	Proportion of Variance Lying Between Schools at Time 3	
	N=87 schools*	N=79 schools**
Positive School Attitudes	10%	11%
Negative School Attitudes	8%	8%
Status of Aspired Occupation	15%	14%
College Plans	12%	14%
Self Concept of School Ability	10%	11%

* Based on all students in all schools regardless of whether they remained in the same school throughout. N=1512 to 1787 students depending on the variable.

** Based on all students remaining in the same school from Time 1 to Time 3 in all schools except those designated as segregated, black schools. N=1136 to 1301 students depending on the variable.

resides between the schools: the great majority of it lies within schools.

Table B-3 indicates the proportion of total variance which lies between schools for five of the seven student outcome dimensions discussed in this Appendix. For the sample we have been analyzing the percent of variance residing between schools ranges from only 8% to 14%. Thus, it is not surprising that school characteristics, either individually or collectively, could not account for much of the total variance in these outcomes. Perhaps, if schools were to vary more in their organizational characteristics, a greater proportion of the total variance would lie between schools and we would then be able to relate particular school characteristics to important differences in outcomes. But until greater experimentation with the form and functioning of schools is tried, it seems likely that researchers will continue to be frustrated in their search for important differential school effects.